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Special Programs

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- Management
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GRADUATE SCHOOL

U.S. Department of Agriculture
Washington, D. C. 20250

1968-1969

Special Programs To Meet Federal Agency Needs

UNITED STATES DEPARTMENT OF AGRICULTURE

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GRADUATE SCHOOL

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SPECIAL PROGRAMS DEPARTMENT

THE GRADUATE SCHOOL

Institutes, Workshops, Seminars, and Special Courses
designed to supplement in-service training programs of Federal agencies

THE GRADUATE SCHOOL

The objective of the Graduate School of the United States Department of Agriculture has always been to provide needed educational opportunities for Federal employees. The Graduate School has six main programs: resident evening, special, correspondence, international, public lectures, and the press. Graduate study is a primary interest of the School, but it also offers a large number of undergraduate as well as non-credit courses. All courses are open to qualified employees of the Federal Government and to other qualified persons as facilities permit.

The Graduate School does not grant degrees and has never sought that authority. It prefers to give courses of standard graduate and undergraduate quality, to assure that quality through the competence of its instructors, and to cooperate with the degree-granting institutions.

The United States Civil Service Commission accepts the credits of the Graduate School, for examination and qualification purposes, on the same basis as those from accredited colleges and universities.

The government of the Graduate School is vested in a General Administration Board appointed by the Secretary of Agriculture. The functions of this Board are similar to those of a board of trustees of a college or university. The School is administered by a director and a small administrative staff. It is nonprofit and receives no Federal funds.

SPECIAL PROGRAMS

The day-time courses of the Special Programs Department are primarily designed to meet the needs of Federal agencies.

The staff of this Department includes training and development specialists whose primary responsibilities are to respond to agency requests. They are available to give advice and develop ideas to help the agency meet its training and development requirements.

Special programs take various forms—seminars, institutes, workshops, and traditional college-type courses. Some are all-day sessions ranging from one day to eighteen weeks; others meet an hour or two once or twice a week for several months. Regular credit courses are also presented during working hours when such courses will more appropriately assist in filling the training needs of the agency.

Classes are held in the Federal Triangle area and in the vicinity of the Graduate School offices in the U.S. Department of Agriculture's South Building. Upon request, classes are taken to the building in which the agency sponsoring the course is located. Some intensive seminars are held out of town in such places as Williamsburg, Virginia.

Public programs:

Regularly scheduled courses open to all qualified government personnel and announced in this bulletin.

In-Agency programs:

Specially designed courses in consultation with the agency to fit the unique requirements of a particular agency. The Graduate School staff will be happy to assist any agency to meet special training needs.

Overall guidance for all Special Programs courses is provided by the Special Programs Committee, listed on page iv. Other committees include the ADP and Management Sciences Committee, listed on page ....; the Public Administration, General Management and Supervision Committee and the Critical Issues and Decisions Committee, listed on page ....; and the Center for Modern Learning Technology Committee, listed on page .....

PROFESSIONAL STAFF

PROFESSIONAL STAFF

Edmund N. Fulker, *Assistant Director and Head of Special Programs Department*

Dr. J. Frank Kendrick, *Associate Head of Special Programs and Manager of Training in Computer Sciences*

Dee W. Henderson, *Associate Head of Special Programs and Manager of Executive and Professional Development*

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POLICIES AND PROCEDURES

Nominees should meet the qualifications indicated for each course. Exceptions may be made if a strong need for training exists and if it would be advantageous to the agency. Address inquiries to the designated members of the Graduate School staff.

Nominations should be submitted by the due date, which is usually three to six weeks before the start of the course. (See dates given for each course.) They should be submitted on agency letterhead using the nomination form format given on the inside back cover page of this bulletin. Nominations should be signed by an agency official, a training officer, or other person so designated, who has responsibility for approving and submitting nominations to the Graduate School.

Individuals without a sponsoring agency should use the nomination form format (see inside back cover page) to apply for any course.

Acceptances will be sent out approximately one week after the nomination due date informing both the agency and the nominee and giving instructions as to where to report for the first session.

Course Fee includes tuition, books, and materials. Course fees are payable in advance; a contract, purchase order, or billing instructions accompanying the nomination will be accepted as advance payment.

Individuals without a sponsoring agency may use the nomination form with a check for the full amount of the fee. Checks should be made out to the Graduate School, USDA.

Cancellations will be accepted without charge if received in writing two weeks or more before the start of the course. After the cancellation deadline, the entire course fee is payable. Substitutions may be made at the discretion of the school.

INSTRUCTORS

The faculty of the Graduate School is recruited mainly from scholars employed in the Federal Service. Most faculty members have taught in high schools, colleges, and universities before joining the Federal Government. Because their positions in the Federal Government relate closely to the subjects they teach in the Graduate School, they bring a fresh academic point of view and a practical approach to the classroom.

NOTE: Highly qualified individuals who are interested in teaching courses during the day and Saturday mornings should contact members of the Special Programs Professional Staff.

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Curriculum of Computer Sciences

General Information

The purpose of the Curriculum of Computer Sciences described in this bulletin is to provide special training for Federal employees and others to meet the particular needs of individual offices, agencies, or Departments in data processing.

Special Courses for Individual Agency

Any course in the Curriculum of Computer Sciences can be redesigned or new courses developed on a contract basis to meet the specific requirements of any agency. Special courses can be conducted on site anywhere in the United States.

Non-Government personnel may enroll in any class.

Academic credit is given the student for each course satisfactorily completed.

Grades. At the close of the course, the student receives written notice by mail of the grade he has received. The following letter grades are used:

A	Excellent	F	Failure
B	Good	Aud.	Auditor
C	Fair	Inc.	Incomplete
D	Passable	W	Withdrawn

Transcript of Record. An information record or transcript may be obtained according to the policy of the Graduate School as outlined in the catalog of the Evening Program.

For further information on Computer Sciences courses, call or write: Mail address:

Dr. J. Frank Kendrick, Manager of Training in Computer Sciences, or
Luella Dever, Administrative Assistant
Special Programs Department
Graduate School, USDA
277 National Press Building
529 Fourteenth Street, N.W.
Washington, D. C. 20004

Telephone: Code 111 (388) 7630 or 7820

ADP and Management Sciences Committee

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NICHOLAS F. SCHAUER, Department of Treasury
B. RALPH STAUBER, Department of Agriculture

BASIC CONCEPTS OF DATA PROCESSING

Course D4-105 3 credits

A series of ten seminar sessions covering the basic concepts of data processing.

DESCRIPTION

This is an introductory course in data processing designed for those persons with no previous experience in this field.

Included in the material to be presented at the seminars are: the History and Development of Data Processing, the fundamentals of Punched Card Data Processing, the fundamentals of Electronic Data Processing (Computers), an introduction to Computer Programing and Systems Design.

Emphasis will be placed on the concepts, terminology, methodology, and career opportunities in data processing.

An aptitude test is given at the close of the course.

OBJECTIVES

On completion of this course, the participants will be able to:

- Qualify for more advanced courses in data processing
- Communicate with the technical personnel in data processing
- Appreciate the role and use of data processing equipment
- Discover what career opportunities there may be for them in data processing

SCHEDULE

Classes meet Saturday mornings 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 25 students who have a strong interest in automatic data processing. Students must be high school graduates or the equivalent.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP ORIENTATION FOR SECRETARIES AND CLERKS

Course D3-112 3 credits

A series of ten seminar and workshop sessions designed specifically for secretaries and clerks.

DESCRIPTION

This is an orientation course to fill the specific needs of secretaries and clerks. With the implementation of more and more automated systems, secretaries and clerks are finding themselves getting involved in data processing. The seminars will present such material as: an introduction and a survey of the various ADP equipment (computer, sorter, card-punch, etc.), fundamentals of data processing, the relationship of ADP to secretarial and clerical functions, ADP printouts, card-punch systems, magnetic tape systems, flow-charts, technical writing and documentation, assignment of secretarial and clerical personnel in ADP, basic ADP concepts, human relations in ADP, and generally what every secretary and clerk should know about ADP.

OBJECTIVES

On completion of this course, the participant will be able to:

- Interpret punched-card data
- Know how ADP equipment works
- Make a print lay-out
- Draw simple flow charts
- Understand basic ADP concepts

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 30 students. Participants are limited to secretarial and clerical personnel who may or may not be directly engaged in ADP activities.

COURSE FEE

$60.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADVANCED CONCEPTS OF DATA PROCESSING

Course D3-113 3 credits

A series of ten seminar and workshop sessions covering advanced concepts of data processing.

DESCRIPTION

This is an advanced course in data processing concepts for those students who have completed basic orientation courses and desire to advance themselves in this field.

Included in the material to be presented at the seminars will be an introduction to: Source Data Automation (SDA), Methods and Performance Standards in Data Processing, Systems and Programing Documentation, Problem Analysis, Cost Analysis, Systems and Equipment Evaluation, Human Factors in Data Processing, and Career Opportunities.

OBJECTIVES

On completion of this course, the participant will be able to:

- Recognize and take advantage of the career opportunities in data processing
- Be aware of the general problems and techniques used in Source Data Automation (SDA)
- Know the needs and requirements for Systems and Programing documentation
- Recognize approaches to problem analysis
- Know the fundamentals of cost analysis
- Gain insight into the methods and techniques of systems and equipment evaluation
- Recognize the human factors in data processing
- Be better prepared for more technical courses in data processing

SCHEDULE

Classes meet Saturday mornings 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 25 students. Students must have completed either courses D4-105 or D3-112 or the equivalent.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING (GENERAL)

Course D3-559 3 credits

A series of ten seminar and workshop sessions covering Data Processing.

DESCRIPTION

These seminars are intended to be an introductory survey of automatic data processing. Included in the seminars will be numbering and coding systems, logical organization and components of ADP hardware systems, ADP communications concepts, software systems concepts, system analysis, flow charting and programing. Highlights of computer acquisition and management will be considered.

OBJECTIVES

- To provide a complete basic understanding of ADP hardware and software
- To acquaint the participant with the concepts and vocabulary of ADP
- To provide an understanding of systems analysis, flow charting, and programing
- To serve as a broad basis for further oriented education in Automatic Data Processing

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed at least two years of undergraduate education or equivalent work experience.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING IBM 360

Course D3-578 3 credits

A series of ten lectures, demonstrations, and workshops to introduce the student to the IBM 360 Data Processing System.

DESCRIPTION

This course is a description and evaluation of the IBM/360 Computer System. Data representation schemes; addressing schemes; input/output (devices, control, and application); instruction and command set logic; software operating systems, programing languages, sort-merge; installation and management considerations will be covered from both theoretical and practical view point. This is not a programing course.

OBJECTIVES

- To provide a complete basic understanding of the IBM/360 hardware and software
- To provide the necessary prerequisites so that the student may continue in further courses toward complete mastery of the IBM/360
- To provide participants who need evaluation criteria and appreciation of the IBM/360 with an in-depth consideration of this system

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, or have experience in programing a stored digital computer.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING HONEYWELL 200

Course D3-573 3 credits

A series of ten classes in programing for the Honeywell 200 computer.

DESCRIPTION

A review of basic Automatic Data Processing Concepts. Introduction to Easycodar Programing language, flow charting, data formats, introduction to H-200 Operating System.

OBJECTIVES

On completion of this course, the student will:

- Be able to write programs in Easycode for the H-200
- Have a basic understanding of the H-200 operating system

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, or equivalent.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING, SPECTRA 70

Course D3-583 3 credits

A series of ten seminar and workshop sessions covering electronic data processing using the RCA Spectra 70 computing systems.

DESCRIPTION

The course is designed to cover major aspects of the RCA Spectra 70 hardware, software, and system usage. The seminars include basic equipment, basic software, instruction complements, data manipulation, comparison and branching, address generation, sectioning and linking, I/O simultaneity, file definition, I/O macros and editing. Class problems illustrating programing instruction, operating systems, I/O control and data handling, etc. will be given. The student will design, code, and assemble a project program. Spectra 70 Operating Systems and computer room operations will be introduced. Student participation in computer room operations will include console operation, tape handling, and punch card handling.

OBJECTIVES

On completion of this course, the participant will be able to:

- Write Spectra 70/35-45-55 programs (using the Assembly System and the Tape Operating System) that process general purpose instructions
- Control the Spectra 70/35-45-55 computer systems while executing basic operations
- Assist other individuals in their organizations in the preparation of user programs

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have Basic Concepts of Data Processing, D4-105, or equivalent.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING
BURROUGHS B5500/6500 SYSTEMS

Course D3-543 3 credits

A series of ten seminars for ADP personnel to acquaint them with the Burroughs B5500/6500 Systems.

DESCRIPTION

This course is designed to acquaint the individual with the highly advanced information processing systems of the Burroughs B5500/6500 Systems. It covers the design concepts and software of the Systems.

OBJECTIVES

To introduce the individual to:

- Automatic control through a full-scale operating systems, (MCP-Master Control Program)
- Multiprocessing of independent programs, with dynamic scheduling by the operating system
- Modularity, for expansion without reprograming
- Efficient, effective use of problem oriented languages
- Hands-on experience

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Training in basic concepts of data processing and programing experience desirable.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

PROGRAMING AND SYSTEM CONCEPTS FOR BURROUGHS B100/200/300

Course D3-556 3 credits

A specialized ten-session programing and systems course for medium size computers.

DESCRIPTION

A study of components, operation logic, command structure, and software for small to medium size data processing systems with emphasis on multiprocessing, COBOL compiling, disk file concepts, data transmission, and operating systems.

OBJECTIVES

- To provide opportunity for practice programing
- To provide laboratory sessions using the Burroughs B300 computer for debugging and testing student's programs

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Completion of Basic Concepts in Data Processing, D4-105, or equivalent, and programing experience desirable.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DISK/TAPE OPERATING SYSTEM (BOS/ DOS/TOS) IBM 360

Course D3-303 3 credits

A series of ten seminar and workshop sessions covering the Basic, Disk, and Tape Operating Systems for the IBM/360.

DESCRIPTION

This course is designed to cover all aspects of the Basic, Disk and Tape Operating Systems. It is intended for programers and programer trainees from installations using BOS/DOS/TOS, and for operators desiring a deeper insight into the functions of BOS/DOS/TOS. The seminars will include a discussion of System Service and System Control programs (e.g. the Superviser, Job Control, Linkage Editor and the Librarian), Sort/Merge, Utilities, Multiprograming concepts, System Generation, Data Management and Operator Communication. The processing programs such as Assembler, FORTRAN, COBOL, PL/1 and RPG cannot be presented in detail in the time alloted, however, the Job Control language necessary to use them will be covered and demonstrated via assignments and workshops. The external specifications of the three systems are so similar that all demonstrations and student exercise will be performed using DOS.

OBJECTIVES

On completion of this course, the participant will be able to:

- Write the necessary Job Control language to execute the processing programs under BOS/DOS/TOS
- Code the Assembler language macro instructions necessary to utilize the Data Management and IOCS facilities of BOS/DOS/TOS
- Use the Utility programs to perform any of the utility functions
- Understand the error messages and interpret the output received from BOS/DOS/TOS
- Assist others in their organizations in using BOS/DOS/TOS

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a knowledge of the concepts of System/360. Experience with System/360 Assembly language or a higher level language is desirable. Experience with a programing system or monitor on a previous system is also desirable.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

OPERATING SYSTEM (OS) IBM 360

Course D3-321 3 credits

This course is a series of ten seminar and workshop sessions covering IBM Operating System/360.

DESCRIPTION

This course is designed to cover the concepts and facilities of Operating System/360. The seminars will include detailed descriptions of the Control Program, Data Management, Job Control Language, and Utilities with practical application of these subjects. Computer workshops will be provided to demonstrate the facilities discussed in the seminars as well as system operation and operator communication. The language translators such as FORTRAN, COBOL, PL/1, and Assembler will not be presented in detail, but their use under the Operating System will be covered. The multiprograming facilities of the Operating System will also be discussed in detail.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the concept and operation of the Operating System
- Utilize the facilities through the Job Control Language and utilities of the System
- Understand and interpret the output of the Operating System
- Assist other individuals in the use of Operating System/360

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a knowledge of the concepts of System/360. Experience with System/360 Assembly Language or a higher level language is desirable. Experience with a programing system or monitor on a previous system is also desirable.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

WORKSHOP IN SYSTEMS PROGRAMING FOR THE IBM 360

Course D3-598 3 credits

A series of ten seminar and workshop sessions designed specially for Systems Programers, covering systems programing for the IBM System 360.

DESCRIPTION

This course is designed as a practical workshop for Systems Programers or those who are training to be Systems Programers. Included in the material to be presented will be: generating a disk operating system (DOS); how to generate and use MACRO instructions; how to assemble and test utility MACROS; multiprograming; and how to generate and use the MACRO/subroutine linkage for writing headers and trailers. Participants in this course will prepare a complete set of control cards and will generate a system. They will generate their own MACROs which will be used to run in multiprograming environment.

OBJECTIVES

On completion of this course, the participant will be able to:

- Generate a DOS for the IBM System 360
- Generate and use MACRO instructions
- Generate and use utility MACRO instructions
- Generate and operate in a multiprograming environment
- Generate MACRO subroutine linkage for header and trailer routines

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants must be Systems Programers or have successfully completed Course D3-303.

COURSE FEE

$120.00, payable in advance. Fee includes some texts used for the course. Participants must have access to an IBM System 360 Operating System Library.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

OPERATOR'S TRAINING IBM 360

Course D3-304 3 credits

This course is a series of ten seminar and workshop sessions covering the operation of the IBM 360.

DESCRIPTION

This course is designed to cover the operation of the IBM 360. Included in the seminars will be the hexadecimal and binary numbering systems, loading of programs, displaying and altering of core storage, setting of sense switches and assigning of tape units. All aspects of operating the IBM 360 in 1401/1460 compatability mode will be covered.

Included also will be an introduction to the operating system (OS) initial program loading (IPL), basic job control language (JCL), job streaming, messages to and replies by the operator. Operation of the IBM 360 in a multiprograming environment will be covered. Procedures for altering and displaying main storage and registers will be discussed.

IBM 360 Model 40 will be used in the workshop sessions.

OBJECTIVES

On completion of this course, the participant will be able to:

- Operate the IBM 360 in a Primary Control (PCP) and Multiprograming (MFT & MVT) environment
- Operate the IBM 360 in 1401/1460 compatability mode
- Assist programers and systems personnel in testing and debugging
- Assist other operations personnel in operating the IBM 360

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participants should have completed Basic Concepts of Data Processing, D4-105, or equivalent. Operating experience on the IBM 1401, 1460 or 360 Systems is helpful but not a prerequisite.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

MODERN COMPUTER SCHEDULING PRINCIPLES

Course D3-301 2 credits

A series of six lectures, discussions and work sessions in the principles and practices of scheduling computer work.

DESCRIPTION

The installation of modern computers with the capability of multiprograming, multiprocessing, teleprocessing, real time systems, etc., have brought a new complexion to problems of job, computer, and task scheduling. Using third generation computers and operating systems as a basis, this concentrated course will cover the principles of the various scheduling methods illustrated by practical examples. Various computer operating systems will be discussed. Scheduling considerations will include foreground-background programs, input-output device scheduling, interference, partitioned core, operator-system-computer communication, etc. Both open and closed shops arrangements will be covered.

OBJECTIVES

Managers, operators, and programers who complete this course will:

- Have a handle on the principles, pitfalls, and methods of scheduling computers
- Know what scheduling systems are being used and planned for use, their advantages and shortcomings
- Be able to schedule computer work flow in both batch and multiprograming environments

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-November 12, 1968	September 13, 1968
Winter: January 11-February 15, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Enrollment is limited to 20 participants. Knowledge and experience in computer operations and operating systems and/or management of computer operators are required. Course D3-321; D3-304; D3-746, and D3-747 will be helpful to participants in this course.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

COBAL PROGRAMING

Course D3-595 3 credits

A series of ten lectures, workshops and computer laboratory sessions leading to proficiency in COBOL programing.

DESCRIPTION

This is a practical course of Common Business Oriented Programing Language (COBOL). The concept of compilers, identification, environment, data division, procedure division, problem definition, flow charting, coding, desk checking, test data preparation, compilation, testing, debugging, and documentation will be learned.

Workshop and laboratory sessions will use the IBM/360 and the operating system and COBOL compiler to solve practical, realistic programing problems. Actual experience in coding, compiling, and testing individual and group problems will be provided in the laboratory sessions.

OBJECTIVES

Upon successful completion of the course the participants will be prepared to:

- Efficiently use COBOL to solve problems of reasonable complexity, and by using the skills gained, develop proficiency in COBOL with additional practice
- Use the IBM/360 operating system efficiently with COBOL
- Know the advantages and disadvantages of COBOL and when and where this language should be used in ADP situations

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, or equivalent.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

THE SYSTEMS APPROACH TO COBOL

Course D3-529 3 credits

A series of ten seminars and workshops covering advanced COBOL programing and basic concepts of systems analysis and design.

DESCRIPTION

This course will provide a system approach to ADP problems involving COBOL programs for the IBM/360. It is designed for personnel having a knowledge of COBOL. Under the guidance of the instructor, the class will design and program a complete system. The system will require only COBOL programs to be written. Participants will be provided with instructions in the basic principles of system analysis and design in addition to advanced techniques in COBOL programing.

OBJECTIVES

Upon successful completion of the course, the student will be able to:

- Design ADP systems using COBOL programs exclusively
- Have a better understanding of COBOL techniques and limitations

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have COBOL programing experience or have completed Course D3-595.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

FORTRAN IV PROGRAMING

Course D3-589 3 credits

A series of ten seminar and workshop sessions covering the FORTRAN IV programing language.

DESCRIPTION

This course is designed to cover all aspects of the FORTRAN IV programing language. Included in the seminars will be basic components, flow of control, floating point arithmetic, constants, variables, arithmetic expressions, looping instructions, input/output instructions, format statements, and subroutines. Workshops will consist of individual and group participation on exercises and problem programs. Actual experience in compiling and testing of programs will be provided. This course is oriented towards the IBM 360 Systems, however, approximately 95 percent of the material covered is applicable to other computers.

OBJECTIVES

On completion of this course, the participant will be able to:

- Write programs of reasonable complexity using the FORTRAN IV programing language
- Assist other individuals in their organizations in using the FORTRAN IV language

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of two years college mathematics and/or statistics or have direct experience or anticipated assignment in a large data processing installation.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

THE SYSTEMS APPROACH TO FORTRAN IV

Course D3-531 3 credits

A series of ten seminars and workshops covering advanced FORTRAN IV programing and basic concepts of systems analysis and design.

DESCRIPTION

This course will provide a system approach to ADP problems involving FORTRAN IV programs for the IBM/360. It is designed for personnel having a knowledge of FORTRAN IV. Under the guidance of the instructor, the class will design and program a complete system. The system will require only FORTRAN IV programs to be written. Participants will be provided with instructions in the basic principles of system analysis and design in addition to advanced techniques in FORTRAN IV programing.

OBJECTIVES

Upon successful completion of the course, the student will be able to:

- Design ADP systems using FORTRAN IV programs exclusively
- Have a better understanding of FORTRAN IV techniques and limitations

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have FORTRAN IV programing experience or have completed Course D3-589.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

REPORT PROGRAM GENERATOR (RPG) IBM 360

Course D3-521 3 credits

A series of ten seminars and workshops covering report generator programing.

DESCRIPTION

Designed for personnel with limited data processing background to write RPG programs for the IBM/360.

This course is especially profitable for students who wish to become fully independent programers in the shortest possible time.

OBJECTIVES

Upon successful completion of the course, the student will be able to:

- Write any relatively complex program that is RPG oriented
- Become a fully independent programer
- Become a valuable asset to any IBM/360 installation
- Code the control cards necessary for the operating system

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have had Basic Concepts of Data Processing, D4-105, or equivalent work experience.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

THE SYSTEMS APPROACH TO REPORT PROGRAM GENERATOR (RPG) IBM/360

Course D3-527 3 credits

A series of ten seminars and workshops covering advanced RPG programing and basic concepts of systems analysis and design.

DESCRIPTION

This course will provide a system approach to ADP problems involving RPG programs for the IBM/360. It is designed for personnel having a knowledge of RPG. Under the guidance of the instructor, the class will design and program a complete system. The system will require only RPG programs to be written. Participants will be provided with instructions in the basic principles of system analysis and design in addition to advanced techniques in RPG programing.

OBJECTIVES

Upon successful completion of the course, the student will be able to:

- Design ADP systems using RPG programs exclusively
- Have a better understanding of RPG techniques and limitations

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have RPG programing experience or have completed Course D3-521.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ALGOL PROGRAMING

Course D3-524 3 credits

A full ten-session course of instruction in ALGOL programing designed to meet the needs of individuals who may need to use the extensive ACM ALGOL Libraries.

DESCRIPTION

The course is designed to provide the student with complete understanding of the ALGOL language as defined by and used in ACM publications to document problem solution. The "natural" 1/10 extensions to ALGOL 60 which can be used to address bulk storage files, remote units, and local 1/0 equipment are included to give the student a more practical ALGOL capability.

OBJECTIVES

The course is designed to:

- Equip the individual with a background in ALGOL languages
- Provide the student with a procedure oriented solution to problems
- Provide the student with a command of the many published ALGOL solutions and relate them to any programing language
- Permit hands-on experience in ALGOL programing, testing, and debugging on the Burroughs B5500

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available

QUALIFICATIONS

Participation is limited to 20 students. Completion of Basic Concepts of Data Processing, D4-105, or its equivalent is highly desirable. Algebra, Geometry and program experience are also desirable.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ASSEMBLER LANGUAGE CODING (ALC) IBM 360

Course D3-523 3 credits

A series of ten lectures and workshops, on the practical use of IBM/360 Assembly Language.

DESCRIPTION

This course will give the student knowledge of the complete assembly language coding instruction set, and the set's use and application to typical data processing problems, both administrative and scientific. General input/output techniques will be discussed and one data set organization input/output method will be used to complete full programing capability. Problem definition, flow charting, coding, testing, and debugging are included.

Workshop sessions with a practical class problem being defined, flow-charted, and coded in assembly language will be brought to fruition by assembling and testing the student's programs on the computer.

OBJECTIVES

Successful completion of this course will enable the participant to:

- Efficiently use ALC to solve the normal complexity programing problems required in ADP installations
- Successfully use the facilities of the IBM/360 operating system to assemble, test, and execute ALC programs
- Develop all basic knowledge and skills which the participant needs to become an accomplished ALC programer with additional work situation practice

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Data Processing System/360 or equivalent experience programing stored program computers in assembler language is a prerequisite of enrollment.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

WORKSHOP IN ADVANCED PROGRAMING TECHNIQUES (IBM 360 ALC)

Course D3-577 3 credits

A series of ten workshop sessions on advanced ALC programing techniques for the IBM 360.

DESCRIPTION

This course is designed to provide IBM 360 programers with sophisticated techniques using ALC.

OBJECTIVES

On completion of this course, the participant will:

- Understand more advanced programing techniques
- Be more cognizant of the capabilities of the IBM 360

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have at least one year's programing experience, using ALC, on the 360; if participants have less than one year 360 ALC experience and desire to apply, permission of the instructor is required.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

PROGRAMING LANGUAGE/ONE PL/I IBM 360

Course D3-522 3 credits

A series of ten lectures combined with computer workshop sessions leading to proficiency in the PL/I programing language.

DESCRIPTION

This course is a practical user-oriented approach to PL/1. The language is defined and explained in detail. Subjects covered include: Program definition, assignment statements, control statements, list and data directed input/output, groups and arrays, structures, edit direct input/output, stream input/output, report writing, built in functions, asynchronous processing, and compile time facilities.

Workshop will consist of defining and solving realistic programing problems. Actual experience in coding, compiling, and testing individual group problems, using the IBM 360 compiler and computer, will be provided.

OBJECTIVES

Upon successful completion of this course the participant should be able to:

- Use PL/1 to solve data processing problems of reasonable complexity and with additional practice will be completely proficient in PL/1
- Operate with adequate proficiency the System 360 and to use this system in conjunction with PL/1
- Know the advantages and disadvantages of the language and be able to advise and make decisions concerning the use of PL/1 in ADP work situations
- Assist others in the use and application of PL/1

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Data Processing IBM 360, D3-578. COBOL, FORTRAN or ALC coding are recommended or equivalent experience in data processing on large scale computer.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

SURVEY OF COMPUTER LANGUAGES

Course D3-526 3 credits

A series of ten lectures, workshops, and discussions to give an in-depth understanding of and develop an evaluation technique for man-computer languages.

DESCRIPTION

This course is designed to give the computer-oriented manager, the systems analyst and the programer a method of evaluating computer languages, enough familiarity with the various languages to select the most efficient and usable language or languages for his program, system, installation or organization. A general establishment of computer language characteristics, criteria for evaluation such as ease of use, maintenance, programing cost, compilation costs, execution efficiency, compatability, expected life of the compiler, limitations, suitability to applications will be followed by in-depth actual controlled experimentation with such languages as FORTRAN, JOVIAL, ALGOL, COBOL, RPG, SIMSCRIPT, ALC, PL/1, AUTOCODER, EASY CODER, MAD, SATRAP, PET, etc. Programs will be written, compiled, and executed in several languages, probably using different manufacturers equipment and software.

OBJECTIVES

Successful completion of this course will enable the participant to:

- Have a valid basis for selecting or judging programing languages
- Achieve a new perspective in the clouded area of computer languages
- Better judge the software offered by the manufacturers and software firms
- Be able to develop programing compiler and object program performance standards

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants must be proficient in programing in at least one language and should have written programs in more than one language. The completion of 2 or more courses in actual programing will satisfy the prerequisite. Because of the intensity of the course, actual need to select and evaluate man-computer language or great interest is highly desirable.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP SYSTEMS ANALYSIS AND DESIGN

Course D3-759 3 credits

A series of ten seminars on systems analysis and design.

DESCRIPTION

This course is designed to cover the basic principles and problems in systems analysis and design and to acquaint the student with the systems approach to ADP. Examples of various systems will be presented.

OBJECTIVES

On completion of this course, the participant will be able to accomplish the following:

- Participate in a feasibility study
- Participate in a systems analysis
- Participate in a systems design
- Prepare documentation for systems work

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have at least six months of programing experience.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP SYSTEMS DESIGN WORKSHOP

Course D3-719 3 credits

A series of ten workshops in Systems Analysis and Design for ADP.

DESCRIPTION

The participants in the workshop will, under the guidance of the instructor, conduct a systems analysis and design. The participants will be provided with a description of the "operation" to be analyzed. All materials will be provided for the analysis and design. By the end of the workshop, each participant will have prepared a complete systems documentation for the project.

OBJECTIVES

On completion of this workshop, the participants will:

- Have a better understanding of the problems involved in systems analysis and design
- Have acquired some new solutions for their own problems
- Be able to assist others in performing better analyses and designs

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a background in programing and at least six months experience as computer systems analyst, or ADP Systems Analysis and Design course, D3-759, or equivalent.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DEVELOPING ADP SPECIALISTS

Course D3-584 no credits

A series of six lectures, discussion experiments and workshops in developing ADP specialists.

DESCRIPTION

Data processing supervisors and managers are faced with the continuing and growing problem of shortages of programers, systems analysts, operators, clerks and above all, good supervisors at all levels. The existing schools and training programs must be supplemented by ADP managers in their own organizations. This course is designed to assist managers, supervisors, and potential supervisors in the training and development of ADP specialists in the faces of these problems of shortages, turnover and dynamic growth. The problems, available solutions, and methods of development for operators, programers, systems analysts, clerks, and supervisors will be covered.

OBJECTIVES

On successful completion of this course, the participants will be able to:

- Select and direct the training and development of ADP specialists at all levels
- Plan for the short term and long range growth of their data processing organization
- Plan their own personal development as ADP specialists and managers

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-November 2, 1968	September 13, 1968
Winter: January 11-February 15, 1969	December 16, 1968
Spring: April 12-May 17, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 25 ADP supervisors or potential supervisory at grade GS-12 or higher. A limited number of GS-11 supervisors who have supervisory experience will be admitted on recommendation of their managers.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

SOURCE DATA AUTOMATION

Course D3-603 3 credits

A series of six seminar and workshop sessions covering Source Data Automation.

DESCRIPTION

This course is designed to survey all aspects of Source Data Automation. Included in the seminars will be systems design for effective utilization, program design for realistic data quality control, operator training, post installation review and evaluation, and equipment selection. The course emphasis will be placed on capturing source data with a minimum of disturbance to an otherwise optimum data processing system.

OBJECTIVES

On completion of this course the participant will be able to:

- Recognize potential application of source document automation
- Participate in the design of an effective SDA system
- Outline the programed edit check procedures required for data acquired through SDA
- Establish proper training procedures for operators of the SDA hardware

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-November 2, 1968	September 13, 1968
Winter: January 11-February 15, 1969	December 16, 1968
Spring: April 12-May 17, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have formal education or practical experience in the field of ADP. An understanding of basic ADP systems and programing concepts is assumed.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

SCIENTIFIC DATA ACQUISITION

Course D3-637 No credits

A series of six lectures, discussions and on-site investigations covering the principles, equipment, and techniques of scientific instrumentation, and data capturing display and retention.

DESCRIPTION

This course is designed to present the student with the practical definition and application of scientific data acquisition principles, methods, techniques, and equipment. Sensors, type of measurement, data reduction, digitization, display, computational reduction of raw data and methods of output from the scientific instrumentation for immediate or delay computer analysis will be covered. Classroom instruction will be supplemented with actual demonstration.

OBJECTIVES

To familiarize those involved with scientific investigation with the state of the art in electronic instrumentation and to provide them with the basics of scientific data acquisition in a practical light.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Winter: January 11-February 15, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants must be actively involved or have interest in scientific research.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

INFORMATION STORAGE, RETRIEVAL, AND DISSEMINATION

Course D3-635 3 credits

A series of ten lectures on the concepts of information storage, retrieval, and dissemination using ADP.

DESCRIPTION

This course is designed to cover the concepts of storing information for subsequent retrieval and dissemination. Documentation, abstracting, indexing, coding, storage, retrieval, vocabulary control, and dissemination methods are presented.

OBJECTIVES

On completion of this course, the participant will be able to:

- Conduct analyses and design of information storage and retrieval systems
- Set up procedures for or supervise an indexing operation
- Assist subject-matter specialists in setting up authority lists
- Set up procedures for information dissemination

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed at least one year of ADP analysis experience.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP AUDITOR APPLICATIONS

Course D3-604 3 credits

A series of ten lectures and workshops designed to give the auditor an insight into the characteristics and methods peculiar to ADP systems and operations.

DESCRIPTION

This course is intended for the auditor, accountant, or data processor who has the demand for auditing or controlling ADP systems and/or installations. The lectures and workshops include practical study of the computers' impact on accounting methods, automated controls, audit trails, sampling techniques, system security, installation standards, planning and executing an audit of a typical system, audit reporting, and role of auditing in ADP management.

OBJECTIVES

Successful participants in this course will be able to:

- Knowledgeably plan and complete an audit of an ADP system
- Install a complete system of automated controls in an ADP system
- Evaluate and improve audit procedures of an ADP system
- Better participate in the management of systems involving automatic data processing operations and methods

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have audit training or experience and currently have or anticipate having auditor responsibility in operations involving data processing.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP BUDGET AND FINANCE APPLICATIONS

Course D3-605 3 credits

A seres of ten seminars and lectures designed to give personnel in budget and finance operations an insight into the characteristics and methods peculiar to ADP operations.

DESCRIPTION

This course is designed for budget and finance personnel who have limited knowledge of data processing and have need for an understanding of ADP methods and techniques as they apply to budget and finance applications.

The seminars and lectures will include a practical study of the computer impact on budget and finance operations, the planning and systeming necessary prior to the automation of budget and finance operations, and the advantages to be gained as well as the pitfalls to avoid.

OBJECTIVES

On completion of this course, participants will:

- Have a basic understanding of data processing
- Have a concept as to how computers handle budget and finance applications
- Understand the problems involved in computerized budget and finance operations
- Know the pitfalls to avoid in planning or generating computerized budget and finance applications
- Be qualified to discuss and effectively work with analysts/programers on budget and finance applications

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have training in budget and finance operations or experience, and currently have or anticipate having responsibility in budget and finance operations involving data processing.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

TELEPROCESSING AND DATA COMMUNICATION SYSTEMS

Course D3-606 3 credits

A series of ten lectures, demonstrations, systems analyses, and discussion concerning principles, applications, and the "state of the art" of teleprocessing and data communication.

DESCRIPTION

As the technology of computers grows in speed and capacity and the scope of data processing increases to include nation-wide and world-wide sources of information and information needs from centralized files and a centralized processor, instantaneous long distance communication equipment and methods are demanded. This course will explore the current state of the art of high speed data communication equipment and methods, teleprocessing, real time, and batch processing. Wire, radio, teletype, data net, Telpack, communication equipment and systems will be covered as well as central processor and peripheral systems and programing methods and requirements. Cost factors, response time, and the advantages and disadvantages of various equipment and methods will be analyzed. Visits to operating installations will be made to observe current solutions to practical problems in teleprocessing and data communication.

OBJECTIVES

Participants in this course will:

- Know the principles, considerations, pitfalls, costs, and methods involved in teleprocessing and data communication
- Obtain knowledge in depth of actual working installations
- Have broad practical principles with which to plan, install, and evaluate teleprocessing and data communication systems

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have completed Basic Concepts of Data Processing, D4-105, and at least one advanced data processing course or equivalent, plus vital interest in teleprocessing and data communication.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

WORKSHOP IN TELEPROCESSING

Course D3-638 3 credits

A series of ten workshop sessions in Teleprocessing and Data Communications.

DESCRIPTION

The participants in this workshop will, with the guidance, counseling and stimulation of the instructor, conduct the analysis, design, and evaluation of one or several teleprocessing or data communication systems. The class will participate in selection and definition of the projects. By the end of the workshop each participant will have defined, designed, and documented a teleprocessing or data communication system. The subject matter will, as far as practical, be those for which the participants have particular need and/or interest.

OBJECTIVES

On completion of this workshop the participants will:

- Have a better understanding of the practical problems involved in teleprocessing and data communication systems
- Have acquired some solutions to their own problems
- Be able to assist others in designing and implementing teleprocessing and communication systems

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. A background on the principles of telecommunications is required. The participants should have completed course D3-606, Teleprocessing and Data Communication Systems, or the equivalent.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

PLANNING, PROGRAMING, BUDGETING SYSTEM (PPBS)

Course D3-714 3 credits

A series of ten seminar and workshop sessions covering the problems, challenges and concepts of PPBS.

DESCRIPTION

Bureau of the Budget Bulletin 68-2 established the requirement on the civilian agencies to implement the Planning-Programing-Budgeting Systems (PPBS) which has already been adopted by the Defense Department and several other agencies. This course covers the purpose, need and objectives of PPBS; the concepts; how it operates to assist in allocating limited resources; the weaknesses of PPBS; a comparison of PPBS with other methods and techniques; why it is being adopted; how an agency goes about implementing PPBS; what can be expected from PPBS; the use of ADP in PPBS; and the experience of some agencies with PPBS.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the problems and concepts of PPBS
- Know how to implement PPBS
- Know how to use PPBS to allocate limited resources for optimum utilization
- Recognize certain pitfalls of PPBS and avoid them

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should be management personnel who are involved, directly or indirectly, with PPBS.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

PPB COST BENEFIT STUDIES AND COST EFFECTIVENESS ANALYSES

Course D3-761 3 credits

A series of ten workshop sessions covering techniques, theories, and application of cost benefit studies as applied for program analysis and comparisons.

DESCRIPTION

Bureau of the Budget Bulletin 68-2 established the requirement on civilian agencies to implement the Planning-Programing-Budgeting System concept already employed by the Defense Department. This course is designed for PPB, budget, management, systems, or program analysts who are required to price out and compare the relative costs of programs in order to provide the decision-makers a monetary yardstick for exercising intuition and judgment in the allocation of resources. Specific problems and exercises will be presented for classroom analysis requiring participants to apply cost benefit techniques and methodology. Specific instructions will be provided to participants on analytical techniques employed to conduct cost effectiveness studies. This course concentrates attention on the analytical aspects of PPB including the discounting of money, the use of models, the introduction of simple economic principles for program evaluation and data presentation for statistical analysis.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the concept of cost benefit studies
- Know the simple economic principles applied in cost effectiveness analysis
- Know how to organize and complete a cost benefit/cost effectiveness study
- Know how to present statistical and analytical data to highlight resource requirements

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students who should be involved directly or indirectly with the analytical aspects of PPBS. Completion of Planning, Programing, Budgeting System (PPBS), D3-714 is desirable but not required.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP DOCUMENTATION AND WRITING

Course D3-512 2 credits

A series of six seminars and workshops covering documentation and writing for ADP installations.

DESCRIPTION

This course is designed to cover all aspects of documentation and writing for ADP installations. Included in the course will be operations documentation, programing documentation, systems documentation, administration documentation, and report writing for non-ADP readers. The students will prepare, under the guidance of the instructor, a model procedures manual for documentation.

OBJECTIVES

On completion of this course, the participant will be able to:

- Write documentation standards and procedures for his own organization
- Assist others in preparing documentation
- Create better reports and presentations on ADP subjects, especially when they are to be presented to non-ADP personnel

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-November 2, 1968	September 13, 1968
Winter: January 11-February 15, 1969	December 16, 1968
Spring: April 12-May 17, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should be senior programers, programer supervisors or have permission of instructor.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP FOR EXECUTIVES

Course D3-718 no credits

A 3-day seminar designed to provide executives with an indoctrination in the basic principles of ADP and an overview of the executive's involvement with it.

DESCRIPTION

Executives are provided with the basic concepts of ADP along with the new concepts in management created by it.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the basic concepts of ADP
- Understand how ADP systems function
- Understand the managerial considerations involved in planning, setting up, and operating ADP systems
- Become familiar with representative equipment, its application and potential

SCHEDULE

Classes meet Mondays through Wednesdays 8:30 a.m. to 4:30 p.m.

Courses will be held:	Nominations due:
Fall: October 7-9, 1968	September 13, 1968
Winter: January 13-15, 1969	December 16, 1968
Spring: April 14-16, 1969	March 20, 1969

QUALIFICATIONS

Participation is limited to 25 executives at the GS-13 (or equivalent) level and above.

COURSE FEE

$150.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

HUMAN FACTORS IN DATA PROCESSING

Course D3-722 3 credits

A series of ten workshops, seminars, and lectures covering the various human factors affecting a data professing operation.

DESCRIPTION

This is a practical course dealing with human relations problems in organizations, with particular emphasis on the data processing environment. Interpersonal skills in an ADP operation will be explored and discussed. A framework for understanding and handling interpersonal problems in such areas as training, motivation, leadership, and morale will be offered.

OBJECTIVES

On completion of this course, participants will:

- Understand the basic principles of human behavior as they relate to creativity, job commitment, and production
- Be acquainted with a practical approach to personnel problems
- Understand the factors that influence morale in an ADP operation

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have the responsibility for the work of subordinates i.e., Director, Deputy Director, Branch Chief, Section Head, Project Leader, or equivalent responsibilities.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

STATISTICAL METHODS FOR FEDERAL EXECUTIVES

Course D3-13 no credits

A series of twelve seminars for the non-statistician who uses statistical results in planning and problem-solving.

DESCRIPTION

This course is designed for the non-statistician executive who needs a grasp of fundamental concepts and a general understanding of the more sophisticated applications of statistical methods.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the development, need, and growth of statistical theory and methods in government
- Explain the ways in which modern statistical theories and practices can be used in dynamic management
- Communicate with specialist in the field and understand and interpret their reports

SCHEDULE

Classes meet Mondays, Wednesdays, and Fridays, from 9:30 to 11:30 a.m.

Seminars will be held:	Nominations due:
Fall: October 7-November 1, 1968	September 13, 1968
Spring: March 3-28, 1969	February 15, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 executives. Open to executives at the GS-13 (or equivalent) level and above.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

STATISTICAL METHODS FOR RESEARCH WORKERS

Course D3-742 3 credits

A series of ten seminars for the statistician to become familiar with the use of computers in statistical research.

DESCRIPTION

This course is designed to cover general aspects of (1) sampling distributions and statistical inference as associated with estimation and testing of hypotheses; (2) design, analysis, and interpretation of data from experiments or sample surveys; (3) uses of chi-square, analysis of variance and analysis of covariance; and (4) basic design principles of completely randomized, randomized block, Latin square, split plot, incomplete blocks, factorials and confounding. Included in the seminars will be basic concepts, principles and procedures for applying computer techniques to the subjects mentioned above with emphasis on preparing systems and program specifications.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand concepts of probability, sampling and experimental error, statistical inference, and hypothesis testing
- Set up an appropriate survey design for sample surveys or research experiments
- Analyze statistical data collected from sample surveys and research experiments using one or more of the basic designs studied
- Set up and write ADP specifications for computer analysis programs for analyzing statistical data

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of nine semester hours of college mathematics and/or statistics, that includes a recent course in elementary or intermediate statistical methods. Familiarity with ordinary methods of tabulation of experimental or sample survey data and some background in basic computer concepts is desirable.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

COMPUTER SOLUTION OF STATISTICAL ANALYSIS PROBLEMS

Course D3-732 3 credits

A series of 14 seminar and workshop sessions covering statistical methods and the application of computers to their use.

DESCRIPTION

The course briefly reviews the principals on which statistical techniques are based. Topics to be emphasized will be the analysis of variance, correlation, multiple regression, and curve fitting. Computer solutions with widely available generalized analysis programs will be emphasized in the discussion of each statistical technique. Case studies and actual computer solutions will be used with each of the analysis procedures studied.

OBJECTIVES

On completion of this course, the participant will be able to:

- Solve data analysis problems using the more basic statistical techniques
- Utilize certain widely available computer programs to carry out these statistical analyses

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28, 1968-January 18, 1969	September 13, 1968
Spring: February 15-May 24, 1969	February 1, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of one course in college algebra, one course in basic statistics, and some concept of the use of electronic computers, or the equivalent work experience.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

INTRODUCTION TO OPERATIONS RESEARCH

Course D3-533 3 credits

A series of fifteen lecture/seminars designed to introduce the student to the nature of Operations Research.

DESCRIPTION

This course will cover the genesis and subsequent development of Operations Research emphasizing its characterizing methodology, and the mathematical models. These topics will be discussed in broad terms whereas the more specific tools of Operations Research, such as Probability Theory and Statistics, will be treated in more detail. Linear programing and methods used in the preparation and analysis of data and experimental results will also be discussed. Demonstration of the applicability and versatility of Operations Research will take the form of a review and discusion of case histories taken from industry, civil government, and military research.

OBJECTIVES

The objectives of this course are to:

- Trace the development of Operations Research and explain its basic methodology—the mathematical model
- Develop some of the tools of Operations Research so that the student will understand some of the capabilities and limitations of the methodology
- Expose the student to some of the administrative aspects of carrying out Operations Research in his own organization

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28, 1968-January 25, 1969	September 13, 1968
Spring: February 15-May 31, 1969	February 1, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of two years college mathematics and/or statistics.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ECONOMIC CONCEPTS FOR OPERATIONS RESEARCH

Course D3-517 3 credits

A series of fifteen lectures covering basic principles of economics essential to formulation and interpretation of many operations research problems and computer based econometric models.

DESCRIPTION

This course will provide a survey of basic economic concepts important in the formulation of operations research problems and econometric models. The role of the "price system" in resource allocation will be examined and individual, corporate and governmental economic decision criteria contrasted. The theory and measurement of economic growth will be explored. The implications of growth assumptions, discount rates, and other factors important in capital investment decisions and in construction of models for use in problems associated with time will be emphasized.

OBJECTIVES

The objectives of the course are to:

- Survey basic economic concepts relevlant to formulation and solution of operations research problems
- Develop an understanding of economic growth and its importance in the analysis of problems and models involving time series data
- Demonstrate the sensitivity of certain econometric model solutions to the economic assumptions included in the model

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28, 1968-January 25, 1969	September 13, 1968
Spring: February 15-May 31, 1969	February 1, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have an interest in economic analysis and responsibilities including the formulation of economic problems/models and their evaluation and interpretation for decision making. Prior course work in economics will be useful but not required.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

LINEAR PROGRAMING

Course D3-532 3 credits

A series of fifteen lecture/seminars designed to introduce the student to the nature of Linear Programing.

DESCRIPTION

This course will emphasize the simple theory and applications of Linear Programing. The theory enables the student to grasp the basic concepts while the applications broaden and exemplify these concepts. Topics included are: Linear Program Formulations, Graphical Solution Techniques, the Simplex Method, Duality, and the Transportation Problem. To provide for a basic understanding, case studies and the various methods for solving linear programs will be emphasized.

OBJECTIVES

The objectives of this course are:

- To teach the fundamental techniques and methods for solving linear programs
- To provide the student with numerous actual examples and cases
- To show the student how to define and solve his own linear programing problems

SCHEDULE

Classes meet Saturday mornings from 9:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28, 1968-January 25, 1969	September 13, 1968
Spring: February 15-May 31, 1969	February 1, 1969

QUALIFICATIONS

Participation is limited to 20 students. Participants should have a minimum of two years of college mathematics and/or statistics.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

SIMULATION APPLICATIONS

Course D3-728 3 credits

A series of ten lectures, colloquia and/or workshops concerning the theory and application of simulation.

DESCRIPTION

Primarily digital-computer oriented, the course will touch on other techniques of simulation: analogue and manual. It will include the theory necessary to comprehend the large-scale simulations to be used as examples. The areas of these examples include games of war and management as well as simulations in personnel systems, industrial job-shops, computer systems, traffic control, communications networks and inventory control systems. Exposure will be given in the very basics of two simulation programing languages—SIMCSRIPT and GPSS. Using these basics the student will formulate and program some simulations which will then be run on a computer in his presence. Each student will be expected to deliver a written and oral report on a simulation in an area of his choice which he has researched.

OBJECTIVES

Provide the student with the basis for an appreciation of the utility and limitations of simulation, especially as a tool of management.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have one year of college mathematics, algebra, or business statistics or equivalent, and have responsibilities or interest in management.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP TRANSPORTATION APPLICATIONS

Course D3-724 3 credits

A series of ten seminars and workshops on computer applications of land, sea and air transportation problems.

DESCRIPTION

This course is designed to explore the area of systems design in the transportation field. Subject matter in the field of transportation and computer capability are available. Bridging the gap between the two is an area that remains to be explored. Examples of classic problems confronting the transportation field are examined in detail to give the student insight into the ramifications of the problem and an opportunity to develop a system solution. The currently accepted solution which is used in the field is presented to illustrate the ingenious techniques developed by leaders in transportation system design work.

In some cases several solutions are examined and evaluated to illustrate that there is more than one possible solution and that quite often the differences are slight or a matter of preference.

OBJECTIVES

Upon completion of this course, the participant will have more insight into the many techniques employed in the field and will be equipped to better utilize the capabilities of electronic computer equipment as a tool in solving the many problems in the field of transportation.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Fall: September 28-December 7, 1968	September 13, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have senior analyst and senior program training and experience or equivalent.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP ENGINEERING APPLICATIONS

Course D3-743 3 credits

A series of ten lecture and workshop sessions for engineers with no previous experience with digital computers.

DESCRIPTION

This course is intended to acquaint the engineer who has no previous experience with digital computers with the areas of application of a general purpose digital computer to engineering problems. Subjects covered will include a short history of computing, what a computer is and what it works with, mathematical methods, programing languages with an emphasis on FORTRAN, and discussions of specific engineering applications. There will be an opportunity to program and check out short jobs on a computer.

OBJECTIVES

This course is intended to provide the engineer with enough background knowledge to enable him to determine the feasibility of the effective and economic use of a computer for various applications and to develop procedures for best utilization of the computer.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nomiations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Enrollment is limited to those persons with a degree in engineering or the physical sciences, or with equivalent experience in the field. No experience with a digital computer is required.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP MEDICAL APPLICATIONS

Course D3-756 3 credits

A series of ten seminar and workshop sessions covering ADP Medical Applications.

DESCRIPTION

This course is designed to be a survey of medical applications of ADP. Included in the seminars will be discussion of the hardware configurations available to a medical complex and record maintenance applications in both the administrative and patient history. Other discussions will be directed toward utilization of the computer as a tool for medical research and real time patient monitoring. The emphasis of the course will be placed on realization and insight into practical applications of the computer within a hospital environment.

OBJECTIVES

On completion of this course the participant will be able to:

- Possess a basic insight into ADP systems and programing of medical applications
- Recognize potential ADP application to the medical environment
- Participate with the subject matter specialist in design of such a system

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have formal education or practical experience in medical environment.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP LIBRARY APPLICATIONS

Course D3-514 3 credits

A series of ten lectures and workshops designed to give librarians and library assistants the fundamentals of data processing as applied to library operations and procedures.

DESCRIPTION

This course is intended for both professional and non-professional personnel working in libraries or interested in the impact of automation on library work.

The lectures and workshops will include an introduction to the principles and terminology of automatic data processing; system analysis and system design principles; use of the tools and techniques of systems analysis and design, including flowcharting; study of punched card and punched tape machines used in library applications; an introduction to computers, computer systems, and computer programing, particularly as used in library applications; study of automated systems in acquisitions work, in cataloging, in serials control, and in circulation; an introduction to the principles and general types of information retrieval; a study of various automatic indexing and abstracting techniques, including KWIC and SDI; and a brief consideration of the administrative implications of library automation.

OBJECTIVES

On completion of the course, participant will:

- Have a basic understanding of data processing and computers
- Understand the ways in which data processing and computer techniques are now being used in library work
- Be able to do elementary analysis of library operations and their potential for automation
- Be able to work with analysts, programers and other experts in designing automated library systems

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have formal training and/or experience in library work and an interest in ADP applications to library procedures. No prior training or experience in data processing is required.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP APPLICATIONS FOR BANKERS

Course D3-768

A series of ten seminar and workshop sessions covering data processing for bankers.

DESCRIPTION

This course is especially designed for those persons in the Banking profession who want to understand and keep abreast of the use and development of Automatic Data Processing as a tool in the field of banking. Included in the material to be presented at the seminars are: An introduction to ADP machine methods; Savings Accounting, Loan Payments, Interest Dividend Reporting, Brokerage Accounting, Billing and Collecting Services, Real Estate Loans Accounting, Reconcilement Services, and Credit Card accounting. Among the automated systems to be discussed in detail will be the MICR-encoded (Magnetic Ink Character Reader) and OSCAR (Overnight Statewide Customer Accounting Reporting).

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the uses and purposes of ADP equipment
- Know what is being done in the banking profession with this tool
- Understand the workings of some of the operating ADP systems used in the banking profession
- Understand some of the problem areas and be able to cope with them when encountered in their own operation
- Evaluate his own operation in terms of the uses that APD equipment may be applied
- Be able to communicate with the ADP technicians

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants must be in the banking profession. Prior knowledge of data processing not required.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP APPLICATIONS FOR LAWYERS

Course D3-763

A series of ten seminar and workshop sessions covering data processing for lawyers.

DESCRIPTION

This course is especially designed for lawyers who want to understand and keep abreast of the use and development of Automatic Data Processing as a tool within their profession. Included in the material to be presented at the seminars are: An introduction to ADP machine methods; Uses and contracting for computers; ADP uses in the Legal Practice particularly in legal research, estate planning, legal record keeping, law office management, dockets and court congestion. Working legal systems will be discussed including the Internal Revenue System, the legal retrieval system used by the G-W Graduate School of Public Law, the lawsearch service offered by a private firm, the automation of the health statutes by the University of Pittsburgh, and the work being done by the ABA and the Special Committee on Electronic Data Retrieval.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the uses and purposes of ADP equipment
- Know what is being done in the law profession with this tool
- Understand the workings of some of the operating ADP systems used in the legal practice
- Evaluate his own operation in terms of the uses that ADP equipment may be applied
- Be able to communicate with the ADP technicians

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants must be lawyers. Prior knowledge of data processing not required.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP FOR PERSONNEL ADMINISTRATION

Course D3-767

A series of ten seminar sessions covering data processing for personnel applications.

DESCRIPTION

This course is specially designed for those persons engaged in the Personnel field who want to understand and keep abreast of the use and development of Automatic Data Processing as a tool used in Personnel Administration. Included in the material to be presented at the seminars are: An introduction to ADP machine methods; Personnel Accounting; Personnel Record Maintenance; Personnel Skills Inventory; and the problems and effectiveness of Source Data Automation (SDA) for personnel systems. Among the automated systems to be discussed in detail will be the CSC Executive Inventory, NASA's Personnel Management Information System (PMIS), and the Department of Commerce's SPARTAN system. This will be supplemented by several automated Personnel Systems now being implemented in private industry.

OBJECTIVES

On completion of this course, the participant will be able to:

- Understand the uses and purposes of ADP equipment
- Know what is being done in the Personnel field with this tool
- Understand the workings of some of the operating ADP systems used in Personnel Administration
- Understand some of the problem areas and be able to cope with them when encountered in their own operation
- Evaluate his own operation in terms of the uses to which ADP technology may be applied
- Be able to communicate with the ADP technicians

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants must either be in the Personnel field or be ADP technicians who are now, or shortly will be, involved in the automation of Personnel Systems.

COURSE FEE

$120.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

COST ACCOUNTING OF COMPUTER OPERATIONS

Course D3-746 3 credits

A series of ten lectures supplemented by class problems covering all aspects of data processing cost consideration.

DESCRIPTION

This course includes the description and consideration of all cost elements of data processing; computer central processors, input/output devices, manpower and special equipment, data preparation and distribution, system analysis and programing, overheads and contingencies. Recording techniques, methods, and devices are also studied. The incorporation of all these elements into a meaningful system of cost accounting, diagnosis, and forecasting completes this practical course in ADP cost study. Problems of batch and job processing, open and closed shop, and multiprogramed computer systems will be covered.

OBJECTIVES

At the completion of this course the participant will have the principles and practice necessary to:

- Set up a complete system for computer installation cost accounting
- Diagnose cost reports and set standards for all phases of ADP operations; systems, programing, and machine operations
- Estimate and forecast overall and individual ADP project costs
- Study existing and proposed ADP installations and make them more efficient

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should have experience in computer systems analysis, programing, operations and/or supervision or management.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING MANAGEMENT

Course D3-747 3 credits

A series of ten seminar and workshop sessions covering data processing management.

DESCRIPTION

This course is designed both for those who actually manage automatic data processing installations and for those managers who are subject matter oriented and are users of ADP services. Included in the material to be presented at the seminars are: ADP equipment acquisition; ADP cost analysis; the preparation of action plans for ADP applications; personnel recruiting, staffing, training and retraining; human behavior in ADP; establishing standards for ADP; establishing ADP controls and measurements; management information systems; government regulations and agency policies affecting ADP; and ADP contract administration. Case studies and problems will be discussed and analyzed.

OBJECTIVES

On completion of this course, the participant will be able to:

- Recognize ADP management problems and be able to pursue appropriate courses of action in their solution
- Evaluate ADP applications to determine priorities, cost analysis, and time schedules
- Know the ADP personnel problems and possible solutions
- Recognize the human element in ADP
- Establish standards and controls in ADP to insure the most efficient use and benefits are derived from the system
- Establish a management information system

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. Participants should be supervisory personnel who either manage ADP facilities or are subject matter supervisors who use, or anticipate use of, ADP services.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

WORKSHOP IN ADP MANAGEMENT

Course D3-754 3 credits

A series of ten seminars on a post-graduate level dealing with class selected ADP management problems.

DESCRIPTION

This course is a coordinated study of ADP management, including a combination of lectures, discussions, reading, research, and reporting. The class will be divided into study groups after an introduction and organization meeting, in which the participants will select subjects to be pursued. Subsequent meetings will include lectures, discussions and reports. Each group will prepare an oral and written report of their research. A bound copy of all the written reports will be given to each student at the completion of the course. Typical subjects include recruitment, selection, training, evaluation, salary, administration, organization, etc. The course may be taken more than once for credit since the areas of management researched will vary with each session.

OBJECTIVES

This course will give the participants the following:

- Research opportunities to study and develop principles of management as applied to the unique functions of ADP
- A colloquium for practicing ADP manager
- A means for developing methods and practices of these methods in their application to their own shops and situations
- Basis for building a unique body of ADP management principles

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	Nominations due:
Winter: January 11-March 22, 1969	December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 20 students. This course is open to ADP managers, assistant managers, and a few prospective ADP managers. Participants should have completed Data Processing Management, D3-747, or equivalent.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

DATA PROCESSING EQUIPMENT EVALUTION AND SELECTION

Course D3-744 2 credits

A series of six conferences designed for Executives and Managers who need to know how to evaluate and select computers and other data processing equipment.

DESCRIPTION

This course is designed to cover the many aspects of automatic data processing equipment selection. Subject matter to be included in the conferences will be the feasibility study, the applications study, equipment specifications, the evaluation of proposals, site preparation and installation, parallel operations, conversion, government regulations and agency policies. Although the course will be geared to computer equipment acquisition, peripheral and supporting equipment will also be covered. Case studies and problems will be discussed and analyzed.

OBJECTIVES

On completion of this course, the participant will be able to:

- Know how to conduct and evaluate both ADP feasibility and ADP application studies
- Prepare equipment specifications to solicit proposals and to be able to evaluate the proposals submitted by manufacturers
- Design the lay-out of equipment for installation
- Plan and phase-in operations on the equipment to gain maximum machine utilization
- Recognize government regulations, including the Brooks Bill, and policies affecting ADP equipment acquisition and know what they mean.

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-November 2, 1968	September 13, 1968
Spring: April 12-May 17, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

A special course on this subject tailored to organization's individual needs can be arranged on a contract basis.

QUALIFICATIONS

Participation is limited to 20 students. Participants should be supervisory personnel who are, or expect to be, involved in ADP equipment acquisition.

COURSE FEE

$75.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

FEDERAL CONTRACTING FOR ADP SOFTWARE PRODUCTS

Course D3-594 3 credits

A series of ten seminar and workshop sessions covering the contracting in the Federal Government for ADP Software Products.

DESCRIPTION

The course is designed to bring together persons with contracting experience or responsibilities for the purpose of receiving and exchanging information pertinent to the successful contracting and awarding of automatic data processing work in the Federal Government. The course will be directed to ADP Systems Analysis, Programing, Documentation, and ADP Operations—other than the computer itself, the site and utilities or computer maintenance.

ADP contracting skills will be developed and improved through lecture, group and panel discussions; classroom case studies; Requests for Proposal structuring, techniques of evaluation and selections, negotiating and make-up of the contractural documents.

OBJECTIVES

Upon completion of this course, the participant will be able to contract for ADP Services related to the following:

ADP Feasibility Studies	Programing (Scientific and Business)
System Analysis	Program Conversion Techniques
System Design	ADP Operational Services
Operational Analysis	EAM Services

SCHEDULE

Classes meet Saturday mornings from 8:00 a.m. to 12:00 noon.

Courses will be held:	**Nominations due:**
Fall: September 28-December 7, 1968	September 13, 1968
Spring: April 12-June 21, 1969	March 20, 1969

Nominations accepted after due date if class space is available.

QUALIFICATIONS

Participation is limited to 25 students, usually GS-11 and above who have had no prior or limited contracting experience in ADP. The course is also open to ADP industry or company employees with Contracting or Marketing responsibilities. Consideration will be given to individuals in GS-7 and above presently engaged in ADP Contracting work. Nominees should be well versed in the general overall Federal Contracting methods, laws, and regulations, and have a genuine motivation to work in this field.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made using the nomination form format given on the inside back cover page of this bulletin.

For further information call Dr. Kendrick, Code 111 (388) 7630 or 7820.

ADP CAREER COUNSELING

A service designed to assist the individual in determining his aptitude in the field of data processing.

DESCRIPTION

The counseling consists of two sessions:

1. Individual takes a practical ADP aptitude test and completes a specially developed questionnaire to list his training and experience and to indicate his response to inquiries that may be helpful to the counselor in advising him in regard to a career in ADP.
2. Individual has an interview with an experienced and competent counselor in the data processing field to evaluate results of ADP test, as well as the education, experience, training, and special interests of the individual. Results are confidential and are revealed only to the individual.

Sessions are by appointment only, either at 8:00 a.m. weekdays or Saturday mornings. Appointments are arranged to meet the mutual convenience of the individual and the counselor.

COURSE FEE

$20.00, payable in advance. Registration forms may be obtained from the Special Programs Department, Graduate School, U.S.D.A., National Press Building, Room 277, Washington, D. C. 20004.

For further information contact Office of the Manager of Training in Computer Sciences, phone 388-7630 or 7820 or code 111-7630 or 7820.

FACULTY

CURRICULUM OF COMPUTER SCIENCES

BEARDEN, GARY D., (1964). M.S., Texas A & M. Director, Washington Data Processing Center, Statistical Reporting Service, USDA. Taught at Texas Technological & U. S. Air Force Statistical Services Officer School.

BLACKWELL, ROBERT B., (1967). A.B., American University. Chief, Educational Systems, Veterans Administration.

BURGIS, DONALD R., (1965). B.A., Pennsylvania. Digital Computer Systems Analyst, Automatic Data Processing Division, Domestic and International Business, Department of Commerce.

CAPPELLUCCI, THEODORE J., (1967). M.S., Texas A & M. Mathematician, USAF Data Services Center.

CASSIDY, WILLIAM J., (1967). B.S., Maryland. Digital Computer Programer, Civil Aeronautics Board.

CHAROUHIS, GREGORY J., (1967). Burdett Business College. Digital Computer Specialist, Department of Commerce.

CLOSE, KENNETH G., (1964). B.S., River Falls State (Wisc.). Chief, Programming Branch, Bureau of Public Roads, Department of Transportation. Taught at River Falls State.

CONDIE, JAMES W., (1967). M.S., Utah State. Mathematical Statistician, Statistical Reporting Service, USDA.

CONNOLLY JOHN J., (1967). B.B.A., Minnesota. Computer Specialist, NAVCOSSACT Department of Navy.

COOK, LEROY L., JR., (1962). B.A., Albion. Systems Engineer, CDC.

COOPER, TOMMYE, (1967). Ph.D., University of Kentucky. Biometrical Services, ARS, USDA.

COOPER, B. FRANK, (1967). B.A., Maryland. Systems Representative, RCA.

DANIELS, JOHN E., (1967). B.A., George Washington University. Head, Computer Systems Analyst Section, FAA.

DENIT, LOUIS M., (1964). Chief, Production Control Branch, Washington Data Processing Center, Statistical Reporting Service, USDA. Taught in Richmond Public Schools.

DOLES, WILLIAM E., (1967). Comtract Specialist, Goddard Space Flight Center, NASA.

DONALDSON, WALTER A., II, (1967). A.B., Alleghany. Plans Analysis, Atomic Energy Commission.

FERBER, JOHN L., (1967). B.S., Georgetown University Computer Systems Analyst, NASA.

FRAHER, J. J., (1967). M.S., Drexel Institute of Technology. Chief of Special Projects, Management Information System Division, NASA.

GARGANO, H. MICHAEL, (1967). B.S., Virginia Polytechnic Institute. Acting Chief, Data Processing and Math. Section, National Center for Radiological Health, U. S. Public Health Service, HEW. Taught in U. S. Army Reserves.

GARLOCK, ROBERT A., (1967). M.A., George Washington University. Director, Management & Organization Division, Office of Administration for Domestic and International Business, Department of Commerce.

GARON, ALBERT C., (1967). B.A., Maryland University. Planning-Programming-Budgeting Systems Officer, Economic Development Agency, Department of Commerce.

GREENE, CHARLES E., (1967). Union College, Chief, Office of Electronic Systems, Public Health, Service.

HANDON, MARVIN L., (1967). Computer Shift Supervisor, Office of Economic Opportunity.

HOWE, LAWRENCE J., (1967). A.B.A., American University. Technical Assistant to Director of Systems Division, Naval Facilities Engineering Command.

KERR, DAVID V., (1967). B.A., Cornell. System Analyst, CIA.

KRIESBURG, MARTIN, (1952). Ph.D., Harvard. Office of Administrator, International Agricultural Development Service, USDA.

LEIBSLY, FRANKLIN W., (1967). Automatic Data Processing Division, Domestic and International Business, Department of Commerce.

LENZ, ALLEN J., (1967). Ph.D., Stanford. Analyst, Office of Assistant Secretary of Defense.

LONG, RAYMOND J., (1967). LL.B., Catholic University. Director, ADP Division, Office of Administration for Domestic and International Business, Department of Commerce.

MACKIE, ARTHUR B., (1967). Ph.D., Iowa State. Assistant Chief, Economic Development Branch, Foreign Development and Trade Division, ERS, USDA.

MARTIN, WILLIS S., JR., (1967). B.A., Franklin and Marshall College. Instructor, Washington Educational Center, IBM.

McDANIEL, BENJAMIN T., (1967). Ph.D., North Carolina State. Geneticist, Animal Husbandry Research Division, ARS, USDA.

MILLER, ROBERT H., (1965). Ph.D., North Carolina State. Geneticist, Animal Husbandry Research Division, ARS, USDA.

MILLER, MAX R., (1968). Digital Computer Operator, Washington Data Processing Center, Statistical Reporting Service, USDA.

MUSCHTER, ERWIN H., (1967). Applications Analyst, CDC.

NESUDA, ALBERT R., (1967). B.A., Boston University. Chief, Standards and Procedures Branch, Washington Data Processing Center, SRS, USDA.

PABST, WILLIAM R., (1966). Ph.D., Columbia University. Chief Statistician, Naval Ordnance Systems Command.

PARENT, ELIAS A., JR., (1967). Ph.D., Stanford. Staff Assistant, Office of the Assistant Secretary of Defense (Systems Analysis).

PASKO, THEODORE V., (1967). B.S., Syracuse University. Systems Engineer, IBM.

PETERS, DARREL F., (1967). Contract Specialist, Chief, Division of Administrative Service, OMS, USDA.

ROGERS, JOHN F., (1967). B.S., Maryland. Financial Marketing, IBM.

PUTNAM, CHARLES E., JR., (1967). M.B.A., University of Chicago. Chief, Standards and Technology Division, USAF.

QUINLAN, JAMES J., (1967). B.A., Rutgers. System Analyst, Federal Highway Administration.

SALMON, STEPHEN R., (1967). A.B., M.L.S., University of California, Berkeley. Assistant Director, Processing Department, Library of Congress.

SCHAUB, JOHN R., (1967). Ph.D., University of Illinois. Agricultural Economist, Economic Development Branch, Foreign Development and Trade Division, ERS, USDA.

SHUTE, FRANCES R., (1967). M.A., George Washington. Management Specialist (Information System), NASA.

SMITH, RAYMOND W., (1967). A.B., Nebraska. Systems Analyst, Bureau of Public Roads, Department of Transportation.

SMITH, ROBERT S., (1964). Ph.D., Illinois. Staff Analyst, Research Analysis Corporation. Taught at Illinois.

STANDIFER, G. VAN, (1967). Peters Business School. Systems Analyst, Bureau of Public Roads, Department of Transportation.

SULLIVAN, JAMES W., (1967). B.E.E., Manhattan. Systems Engineer, IBM Corp.

SUTER, GLENN W., (1967). M.S., Virginia Polytech. Head, Enumerative Surveys Section, Survey and Data Division, SRS, USDA. Taught at Bridgewater and Shenandoah.

TENNER, BORIS, (1967). Computer Specialist, Andrews Air Force Base.

VELANDER, WALLACE E., (1967). B.A., University of Maryland. Head, Data and Reports Management Section, NASA.

WALLACE, MONTIE, (1967). B.S., Texas Technological College. Agricultural Statistician, SRS, USDA.

WALTZ, FREDERICK, (1967). Ph.D., Purdue. Supervisor, Computing Laboratory, Biometrical Services, ARS, USDA.

WILLEY, EDMUND G., (1967). Senior Systems Analyst, Bureau of Public Roads, Department of Transportation.

WRIGHT, THOMAS G., JR., (1967). University of Illinois. Systems Engineer, IBM.

ZINGER, NORMAN GRIFFITH, (1967). B.A., American University. Psychodramatist, Department of Health, Education, and Welfare.

Curriculum in Management And Professional Development

This series of courses and seminars is designed to provide educational experiences tailored for specific groups of supervisors, managers, and other professionals in Federal Agencies. To the extent possible, each course provides opportunities to explore problem areas which have been found to be common among the professional groups for which the courses are designed.

To assist the Graduate School Staff in maintaining the currency and pertinence of the courses relative to Agencies' needs, special advisory committees provide guidance.

Committee on Public Administration, General Management and Supervision

CLARE HENDEE
Forest Service
Department of Agriculture
Chairman

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National Security Agency

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American Red Cross

ROBERT STOCKMENT
Small Business Administration

BERTRAM STRAUSS
Consultant

JOHN THURSTON
Agricultural Stabilization and Conservation Service
Department of Agriculture

Critical Issues and Decisions Program

The Critical Issues and Decisions program was developed by the Graduate School in 1961 to provide a broadening educational experience for executives which was not being offered in the Washington area. The original set of readings for the program was prepared under contract by the American Foundation for Continuing Education. Each offering of the program has been critically evaluated and improved upon; consequently, the program is continually modified to reflect the changing needs of the executive participants.

As a public service, the Graduate School has offered free lectures by Critical Issues and Decisions scholars, and four of the lecture series have been published and are available from the Graduate School Press.

Critical Issues and Decisions Committee

JOHN G. LORENZ
Library of Congress, Chairman

WALTER ARNOLD
Office of Education

CHARLES BLITZER
Smithsonian Institution

DWIGHT INK
Housing and Urban Development

LLOYD LaMOIS
Forest Service, Department of Agriculture

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ROBERT TOOTELL
Farm Credit Administration

WARREN ZIEGLER
Agency for International Development

JAMES REESE
Postal Service Institute

CRITICAL ISSUES AND DECISIONS FOR FEDERAL EXECUTIVES

Course D6-5

A series of seminars held twice weekly for six weeks for career executives in positions of high responsibility.

DESCRIPTION

Under the personal and direct tutelage of leading writers and scholars the participants become better acquainted with some of the most critical issues facing this country. Emphasis is placed on conducting a joint search for knowledge and understanding. Scholars who have appeared in the program include *David Riesman, Henry Steele Commager, Whitney Young, Hans Morgenthau, Erich Fromm, Max Lerner, Leon Keyserling,* and *Arthur Schlesinger, Jr.*

This program is conducted in two phases. The first is an all-day session for introduction and orientation. The second is a series of 2-hour seminar meetings.

OBJECTIVES

On completion of this course, the participant will be better able to:

- More critically evaluate problems confronting the government
- Apply more incisive analytical techniques in formulating policies and making decisions in his agency
- Cultivate a broad base of knowledge and experience in areas of governmental concern

SCHEDULE

Fall

Phase I—November 6, 1968, 9:30 a.m.-4:30 p.m.
Phase II—November 12, 13, 19, 20, 25, 26
December 3, 4, 10, 11, 17, 18
Seminar A: 10:00 a.m.-12 noon
Seminar B: 1:30-3:30 p.m.

Nominations due: October 11, 1968

Spring

Phase I—March 26, 1969, 9:30 a.m.-4:30 p.m.
Phase II—April 1, 2, 8, 9, 15, 16, 22, 23, 29, 30
May 6, 7
Seminar A: 10:00 a.m.-12 noon
Seminar B: 1:30-3:30 p.m.

Nominations due: March 3, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

QUALIFICATIONS

Participation is limited to Federal executives of the GS-14 (or equivalent) level or above and a few promising potential executives below that level. Seminar groups are limited to 25.

COURSE FEE

$235.00, payable in advance. Fee includes text books and class material.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

CRITICAL ISSUES AND DECISIONS AT BELMONT

Course D6-5 (B)

A one week intergovernmental dialogue held at Belmont, between noted scholars and federal, state, and local executives.

FOREWORD

Increasingly, the American government leader sees his function extending far beyond the solution of problems on his desk or the public crisis of the hour. The successful executive is concerned about developing a realistic perspective of his times and an ability to assess trends, opportunities, and challenges related to the critical issues and turbulent changes of today's world.

While he realizes that facts are important for effective decision-making, he knows that long range effectiveness requires more than facts alone. It demands a comprehension of trends and their direction, identification of important forces in our society, and a recognition that our *governments* are involved in shaping situations and forces through making and enacting enlightened policies and decisions. It demands that local, state and federal executives understand each other's views on the critical issues of our day.

DESCRIPTION

In pursuit of this executive development the Graduate School has designed a one week program that provides an opportunity for state, local and federal executives to search for knowledge and understanding in a forum with leading scholars of our time, scholars such as Henry Steele Commager, Kenneth Clark, Walter Heller, Max Lerner, Donald Michael, Arthur Schlesinger, Jr., Constantinos Doxiadus, and Stephen K. Bailey who have participated in former Critical Issues and Decisions Seminars.

OBJECTIVES

On completion of this program, the participant will be better able to:

- Consider broad social, economic, and intergovernmental political forces and problems
- Examine the impact of these forces and problems on government decisions at local, state and federal levels.
- Identify approaches to problems and anticipate changes and policies growing out of current situations
- Apply more incisive analytical techniques in formulating policies and making decisions in his organization
- Develop broad-gauge but practical leadership qualities

SELECTION OF PARTICIPANTS

Candidates are selected by application. Selection is dependent on current responsbility and position, plus past education and experience. Participants are selected to insure a wide cross-section of the state, local, and federal governments.

APPLICATION DEADLINE

Applications must be received on or before October 28, 1968 for the fall and March 24, 1969 for the spring.

SIZE OF PARTICIPATING GROUPS

The number selected will be limited to twenty-five. Others who qualify will be placed on a waiting list and offered the opportunity to enroll in a later seminar.

TUITION AND FEES

Tuition for participation is $450.00 for the week, which includes meals, lodging and reference materials.

LOCATION AND ATMOSPHERE

Belmont—the Smithsonian Institution's Conference Center at Elkridge, Maryland—is located thirty-five miles from Washington, D.C., twelve miles from Baltimore, and eight miles from Friendship International Airport. The highways from these points are excellent.

Belmont is a "think and discussion center" in an estate-locked retreat free from the distractions of telephones, callers, staff-meetings and office routine. The facilities are clean and comfortable, but not swank. The participants are entertained as guests in an eighteenth century country house, which provides comfortable hospitality combined with solitude and serenity conducive to good thinking and discussion for executives concerned with public problems.

SCHEDULE

Fall program: November 17-22, 1968

Spring program: April 13-18, 1969.

The program begins with a reception, dinner and orientation session on Sunday evening and closes with a luncheon the following Friday noon.

Nominations for this course may be made by using the nomination form format on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

MANAGEMENT DEVELOPMENT PROGRAM FOR FEDERAL EXECUTIVES

Course D6-100 (FE)

A program of in-town sessions and an out-of-town workshop for executives who have had little formal training in current management concepts and practices.

DESCRIPTION

This program is designed for officials with executive responsibilities, or who anticipate managerial assignments. The program should be of especial value to those with little *formal* training in the concepts and practices of management as an emerging, separate profession.

Participants will be encouraged to critically reexamine their jobs and those of their subordinates. Subsequently, they will explore ways to implement the concept of the *work team* as a basic production entity within the organization. The study of *team building* will include an exposure to the theory and practice of conflict resolution and developing more functional working relationships through interpersonal laboratory learning. For maximum learning, participation should be on a voluntary basis.

Other learnings participants can anticipate include: sharpening their perception of individual and supervisory behavior; gaining insights into the process of groups and group problem-solving; measuring and obtaining achievement of organizational objectives; and understanding current theories of management, communications, and motivation.

OBJECTIVES

This program is designed to help the participant:

- Examine the managerial aspects of his job
- Formulate for himself a framework of managerial theory
- Explore ways to improve managerial practice in the day-to-day work situation
- Strengthen his problem solving and team action skills
- Formulate a continuing and systematic program of self-development in management

SCHEDULE

The program is conducted in three phases, extending over several months. The first is a two-day diagnostic and planning meeting in Washington. *Williamsburg, Virginia, is the site of the second phase, an intensive six-day workshop.* The program concludes with a two-day follow-up session in Washington, where members assess the practical application of ideas gained from the program.

Thirty-Eighth Program

November 7 and 8, 1968
December 8 to 13, 1968
January 9 and 10, 1969

Nominations due: October 14, 1968

Thirty-Ninth Program

December 5 and 6, 1968
January 19 to 24, 1969
February 20 and 21, 1969

Nominations due: November 28, 1968

Fortieth Program

February 13 and 14, 1969
March 2 to 7, 1969
April 3 and 4, 1969

Nominations due: January 20, 1969

Nominations accepted after due date if class space is available.

Washington classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

QUALIFICATIONS

This program is designed for men and women in executive and managerial positions at the GS-14 (or equivalent) level and above. Managers at the GS-13 level will be considered. In so far as possible, participants are selected to insure a wide cross-section of Federal agencies.

COURSE FEE

$450.00, payable in advance. Fee includes text books and class material. Travel and per diem are in addition.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

MANAGEMENT PROGRAM FOR EXECUTIVES IN SCIENTIFIC AND ENGINEERING ORGANIZATIONS

Course D6-100 (S&E)

A program of in-town sessions and an out-of-town workshop focusing on the special management problems confronting executives in engineering and scientific organizations.

DESCRIPTION

Managers of scientific and engineering programs are challenged as never before to organize and operate their programs so that the scientists and engineers on their staffs may fully develop and use their creative abilities. Supervision within these fields has become a major area of concern. This program focuses specifically on those management problems faced by executives in scientific and engineering organizations.

Participants are involved in planning and developing their own workshop program within the framework of established objectives. The emphasis of the program usually includes: the establishment and use of performance objectives, group dynamics and inter-personal relations, human relations, motivation, communications, delegation, organization, supervision, manegerial styles, planning, controlling, coaching, decision-making, role playing, effective use of time and committees and case study writing and analysis. Opportunity is provided for small group exchanges of experience and problem solving discussions. This program provides a cornerstone for the continuing self-development of the government executive. For maximum learning, participation in this program should be on a voluntary basis.

University, government, business and industrial authorities are used as resources. Some of these experts in teaching managerial concepts have recently included Dr. William Van Dersal, author of the book *The Successful Supervisor* and the television series Success in Supervision: William Oncken of Oncken Associates, New York City, noted management consultant for business and government; Dr. Jerry Harvey of National Training Laboratories; Dr. Lee Buchanan, Medical Director for the Department of Agriculture; Nathan Baily, Dean of the School of Business Administration at American University; Dr. Marshall Dimock, famed administrator, Dean and teacher of Public Administration; Robert Stockment of Small Business Administration; and James Bostain, of the Foreign Service Institute and winner of an educational television "Emmy."

OBJECTIVES

This program is designed to help the participant from a scientific or engineering organization:

- Examine the managerial aspects of his job
- Formulate for himself a framework of managerial theory

- Explore ways to improve managerial practice in the day-to-day work situation.
- Strengthen his problem solving and team action skills
- Formulate a continuing and systematic program of self-development in management

SCHEDULE

The program is conducted in three phases, extending over several months. The first is a two-day diagnostic and planning meeting in Washington. During this time, needs of the participants are identified and analyzed. *Williamsburg, Virginia, is the site of the second phase, an intensive six-day workshop, tailored to the needs of those attending.* The program concludes with a two-day follow-up session in Washington, where attention is given to assessing the practical application of ideas gained from the program.

Eleventh Program

September 26 and 27, 1968
October 20 to 25, 1968
December 12 and 13, 1968

Nominations due: September 9, 1968

Twelfth Program

November 14 and 15, 1968
January 5 to 10, 1969
February 10 and 11, 1969

Nominations due: October 21, 1968

Fourteenth Program

January 13 and 14, 1969
February 9 to 14, 1969
March 27 and 28, 1969

Nominations due: December 16, 1968

Nominations accepted after due date if class space is available.

QUALIFICATIONS

This program is designed for men and women in executive and managerial positions at the GS-14 (or equivalent) level and above. Managers at the GS-13 level will be considered. In so far as possible, participants are selected to insure a wide cross-section of Federal agencies.

COURSE FEE

$450.00, payable in advance. Fee includes text books and class material. Travel and per diem are in addition.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

MANAGEMENT DEVELOPMENT PROGRAM FOR FEDERAL MANAGERS

Course 6-100 (FM)

A program of in-town sessions and an out-of-town workshop for managers in the GS grades 12 and 13 level.

DESCRIPTION

This program is designed for officials with management responsibilities, or who anticipate managerial assignments. The program should be of especial value to those with little formal training in the concepts and practices of management as an emerging, separate profession.

Participants will be encouraged to critically reexamine their jobs and those of their subordinates. Subsequently, they will explore ways to implement the concept of the *work team* as a basic production entity within the organization. The study of *team building* will include an exposure to the theory and practice of conflict resolution and developing more functional working relationships through interpersonal laboratory learning. For maximum learning, participation should be on a voluntary basis.

Other learnings participants can anticipate include: sharpening their perception of individual and supervisory behavior; gaining insights into the process of groups and group problem-solving; measuring and obtaining achievement of organizational objectives; and understanding current theories of management, communications, and motivation.

OBJECTIVES

This program is designed to help the participant:

- Examine the managerial aspects of his job
- Formulate for himself a framework of managerial theory
- Explore ways to improve managerial practice in the day-to-day work situation
- Strengthen his problem solving and team action skills
- Formulate a continuing and systematic program of self-development in management

SCHEDULE

The program is conducted in three phases, extending over several months. The first is a two-day diagnostic and planning meeting in Washington. *Williamsburg, Virginia, is the site of the second phase, an intensive six-day workshop.* The program concludes with a two-day follow-up session in Washington, where members assess the practical application of ideas gained from the program.

Phase I—October 17 and 18, 1968
Phase II—November 17-22, 1968
Phase III—December 19 and 20, 1968

Nominations due: September 23, 1968

Nominations accepted after due date if class space is available.

Washington classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

QUALIFICATIONS

This program is designed for men and women in managerial positions at the GS 12 and 13 (or equivalent) levels. Managers at the GS 11 level will be considered. In so far as possible, participants are selected to insure a wide cross-section of Federal agencies.

COURSE FEE

$450.00, payable in advance. Fee includes text books and class material. Travel and per diem are in addition.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

MANAGEMENT SEMINAR FOR ATTORNEYS

Course D6-92

A developmental program for executives who have legal training but little formal training in management.

DESCRIPTION

This program is designed for attorneys with executive responsibilities, or who soon anticipate managerial assignments. The sessions will be of particular value to attorneys who have not reached their current levels of responsibility through a management or administrative career.

Participants will be exposed to case studies calling for utilization of management tools and administrative techniques for resolution. Emphasis will be placed upon effective use of legal training in the management profession.

Communication abilities, goal setting, program development, and employee motivation techniques should be enhanced as a result of participation in this program.

The program should be of particular interest to attorneys in regulatory agencies.

University, Government, business and industrial authorities familiar with the attorney's role in management will be used as resources. The program will be team coordinated by Dr. Raymond F. Pelissier (management consultant and former Director of the Business School at Georgetown University) and Robert N. Katz (Solicitor for the Federal Maritime Commission).

OBJECTIVES

This program is designed to help the attorney:

- Cross fertilize ideas with other lawyers in top management posts in the federal service concerning the strengths and problems facing lawyers in management positions.
- Review and become more aware of the principles of management
- Understand and use a recent concept of management now achieving wide acceptance in many organizations—"Management by Objectives"
- Explore new ways of improving their managerial practices
- Encourage his own federal agency to undertake programs for developing the skills of their executive-attorneys
- Formulate for himself a continuing and systematic program of self-development in management

SCHEDULE

Classes meet for three days, Monday through Wednesday, 9:00 a.m.-5:00 p.m.

Courses will be held:	Nominations due:
November 18 to 20, 1968	October 28, 1968
April 14 to 16, 1969	March 24, 1969

Nominations accepted after due date if class space is available.

LOCATION

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

QUALIFICATIONS

This program is designed for men and women with legal backgrounds in executive and managerial position at the GS 13-14 (or equivalent) level and above. Managers at the GS-12 level will be considered. As much as possible, participants are selected to insure a wide cross-section of Federal agencies.

COURSE FEE

$110.00 includes tuition, notebooks and all materials.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

HUMAN BEHAVIOR IN ORGANIZATIONS: A MANAGEMENT SEMINAR FOR EXECUTIVES

Course D6-16

A five day seminar to increase an executive's understanding of, and effectiveness in, human relationships in organizations.

DESCRIPTION

This seminar is designed to provide an opportunity for each participant to examine his effectiveness in organizational life as a supervisor, a subordinate, and as a member of a group. This is to be accomplished through presentation, discussion of current research findings on human behavior in organizations, employing case discussion, role playing, problems solving and small group activities. Maximum attendance for any one seminar is eighteen. This program is open to GS grades 11 through 15.

OBJECTIVES

On completion of this seminar, each participant should have:

- An increased understanding of human behavior typically found in organizations
- A heightened awareness of his own motivations and attitudes
- The knowledge to improve his personal effectiveness within his organizations
- The ability to improve his organizational effectiveness
- A continuing desire for self-improvement

SCHEDULE

Classes will meet Monday through Friday, 9:15 a.m. to 5:00 p.m.

Courses will be held:	Nominations due:
November 18-22, 1968	October 28, 1968
January 27-31, 1969	January 6, 1969
April 7 to 11, 1969	March 17, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

SEMINAR DIRECTOR

Charles F. "Chuck" Austin, Doctor of Business Administration, Harvard. Colonel, Infantry, USA (Ret'd); Author, lecturer, educator and experienced executive with line, staff and research experience; Associate Professor of Organization Behavior and Business Administration, The American University; Professorial lecturer in behavioral sciences, The George Washington University. Author of the award-winning book *Management's Self-Inflicted Wounds: A Formula for Executive Self-Analysis.*

COURSE FEE

$150.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

ADVANCED MANAGEMENT SEMINAR

Course D6-17

A five-day seminar on management systems for managers with broad program responsibilities.

DESCRIPTION

This seminar is designed to provide insight into the systems approach to management and program coordination. It will present the systems concept as a means for developing a multi-discipline team approach to problem-solving and its application to management information systems for various applications. Also to be discussed are the manager's role in developing systems and their utility in optimizing the use of allocated resources.

The instructor is Dr. Willis C. Schaefer with the Department of State's Center for International Systems Research.

OBJECTIVES

On completion of this seminar, participants will:

- Have a working familiarity with the systems approach to meeting organizational objectives
- Have new insight into their roles as managers
- Feel an increased responsibility for developing the systems approach to management within their agencies

SCHEDULE

Classes will meet Monday through Friday, 9:00 to 5:00.

Courses will be held:	Nominations due:
October 7 to 11, 1968	September 16, 1968
April 21 to 25, 1969	March 31, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$150.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SEMINAR FOR WOMEN EXECUTIVES

Course D6-22

A three-day seminar to provide professional women with an opportunity to look for further ways to achieve their full potential in areas "programed by men."

DESCRIPTION

One of the significant developments in the continuing emancipation of women in our society has been the "arrival" of the woman executive as a professional manager. However, women who aspire to realize their full potential for making contributions as executives still find a thorny path to follow. This seminar will provide participants an opportunity to discuss pertinent issues with authoritative resource people and, in the process, develop new insights into their own quest for making greater contributions and achieving self-actualization.

OBJECTIVES

On completion of this seminar, participants will have:

- An increased comprehension of, and confidence in, their potential for making unique contributions to management
- More courage to seek the "free ground" of mutual respect and partnership where both men and women can make their greatest contributions

SCHEDULE

Classes will meet 9:00 to 5:00, Wednesday through Friday.

Courses will be held:	Nominations due:
September 25 to 27, 1968	September 2, 1968
March 12 to 14, 1969	February 10, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

EFFECTIVE SUPERVISORY LEADERSHIP

Course D6-18

A comprehensive seminar in supervisory practices for experienced supervisors who want to become more effective in their jobs yet cannot spent much time away from the office.

DESCRIPTION

This seminar is designed to provide current supervisors with the latest proven techniques and approaches to solving "people problems" and in planning, organizing, and completing on-schedule assignments which are part of overall program objectives. Changing management concepts, technology, and the composition of the work force demand that supervisors remain current with leadership practices which result in more effective supervision. This seminar is for current GS grades 9 through 13.

OBJECTIVES

This program is designed to help the participant:

- Identify and analyze the various supervisory aspects of his job
- Explore new ways of improving supervisory practice in the day to day work situation
- Acquaint himself with supervisory literature through which he may remain currently informed of better supervisors practices
- Insure his continuing success by better understanding the modern supervisory leadership goal which is to create the atmosphere where subordinates can unleash their highest creativity, cooperation, commitment and performance.

SCHEDULE

The Supervisory Leadership course will be held for a total of eighteen hours. It will meet for three weeks each Tuesday and Thursday during the following days:

Courses will be held:

June 4-20, 1968, 9:30 a.m.-12:30 p.m.
September 10-26, 1968, 9:30 a.m.-12:30 p.m.
October 1-17, 1968, 1:30 p.m.-4:30 p.m.
November 5-21, 1968, 1:30 p.m.-4:30 p.m.

February 4-20, 1969, 9:30 a.m.-12:30 p.m.
March 11-27, 1969, 1:30 p.m.-4:30 p.m.
April 8-24, 1969, 9:30 a.m.-12:30 p.m.
May 6-22, 1969, 1:30 p.m.-4:30 p.m.

Nominations due: Three weeks before beginning date.

Nominations accepted after due date if class space is available.

LOCATION

Classes will be held in Suite 277 of the National Press Building located at 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

Cost per person is $65.00 for tuition and all materials.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SUPERVISION AND THE ADMINISTRATIVE PROCESS

Course D4-109

DESCRIPTION

This course is designed to develop knowledge and skills in the techniques of supervision as related to the administrative process. It is appropriate for first line supervisors or those employees anticipating assignment to duties requiring supervisory capability. It is also appropriate for administrative assistants and other administrative personnel who have a need for understanding the administrative process and who have contact with "People Problems" in their everyday work schedule.

OBJECTIVES

Upon completion of this course the participant will be better able to:

- Use effective supervisory techniques in manpower utilization
- Understand the federal administrative process and its relation to supervision
- Develop a program of self development as a supervisor

SCHEDULE

Classes meet Wednesday afternoons for 16 weeks from 4:15 to 6:05 p.m. in Conference Room B-243, Interior Building between 18th and 19th and C and D Streets, Washington, D. C.

Courses will be held:	Nominations due:
Fall: October 2, 1968-January 29, 1969	September 9, 1968
Winter: February 5, 1969-May 21, 1969	January 10, 1969

Nominations accepted after due date if class space is available.

COURSE FEE

$70.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, code 111 (388) 3247 or Claude R. Wright, code 183 (343) 5086.

INTRODUCTION TO SUPERVISION AND MANAGEMENT

Course D4-5

An introductory course for supervisors with limited training in supervision and management and for employees about to assume supervisory responsibilities.

DESCRIPTION

Many people begin their first supervisory jobs without understanding the requirements for effectiveness. The attitudes and skills involved in working individually may need to be modified in order that those needed in supervising others may be developed.

This course is designed for the new supervisor or person under consideration for a supervisory position. Its primary purpose is to enable the supervisor to acquire the management skills and knowledge needed to carry out his supervisory responsibilities.

OBJECTIVES

This course is aimed at helping the individual:

- Become acquainted with literature in the field
- Understand modern concepts of supervision and management
- Formulate for himself a sound approach to management
- Analyze and solve supervisory and managerial problems

SCHEDULE

Classes meet Monday through Friday, 9:00-12:30 p.m.

Courses will be held:	**Nominations due:**
October 7 to 11, 1968	September 16, 1968
February 17 to 21, 1969	January 27, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

QUALIFICATIONS

Participation in this course is open to anyone without formal training in supervision and management. The program is designed for those within GS-7 to GS-13 grade level. Consideration will be given applicants below GS-7 who are being considered for supervisory positions and whose agencies recommend attendance.

COURSE FEE

$135.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SEMINAR FOR PERSONNEL OFFICERS

Course D6-23

A three-day seminar in which new dimensions of the personnel officer's role will be explored.

DESCRIPTION

This seminar is designed to take a look at ways in which personnel programs can be modified to become more responsive to agency needs—by getting the personnel officer into the operating section as an in-house consultant to line managers. This will include discussions of labor-management relations and the personnel officer's responsibility in helping line managers cope with a changing labor market. Along the same line, discussion will center around the personnel officer's role in helping managers formalize their expectations of subordinates in a manner which will create more effective and productive employee appraisals.

The Instructor and coordinator will be Leonard Pouliot, Director of Personnel, Smithsonian Institution.

OBJECTIVES

On completion of this seminar, participants will be able to:

- See the potential for broader cooperation with line managers within their agencies
- Develop a plan for their self-development to meet the expectations that new personnel functions will create

SCHEDULE

Classes will meet 9:00 a.m. to 5:00 p.m., Monday through Wednesday.

Courses will be held:	Nominations due:
October 21 to 23, 1968	September 30, 1968
March 31 to April 2, 1969	March 10, 1969

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

OPERATIONAL PROBLEMS IN PERSONNEL MANAGEMENT

Course D6-304

DESCRIPTION

This course is designed to develop knowledge and skills in personnel management. It is appropriate for employees beginning personnel work and it will enlarge and further develop the skills of those employees already in the area of personnel management. Instructors will be successful personnel officers with a wide range of experience and capability in discussing the many and varied problems that arise in the personnel area. The course will qualify as two credit hours in the regular course work of the graduate school. Class will be limited to 25 participants.

OBJECTIVES

This program is designed to help the participant:

- Develop within a broad area of subject matter appropriate to the profession of personnel work
- Share experiences and the application of policy in a wide range of situations
- Obtain a better understanding of basic policy, rules and regulations that guide personnel actions

SCHEDULE

Classes meet Tuesday afternoons for 16 weeks from 4:15 to 6:05 p.m. in Conference Room B-243, Interior Building between 18th and 19th and C and D Streets, Washington, D. C.

Courses will be held:	Nominations due:
Fall: October 1, 1968-January 28, 1969	September 9, 1968
Winter: February 4, 1969-May 20, 1969	January 10, 1969

Nominations accepted after due date if class space is available.

COURSE FEE

$85.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247 or Claude R. Wright, code 183 (DI 3-) 5086.

SEMINAR FOR GOVERNMENT ECONOMISTS

Course D6-24

A three-day seminar to explore the broadened range of economic problems which must be dealt with by the government economist.

DESCRIPTION

This seminar will examine in depth some of the problems which face the government economist and tend to limit his effectiveness as a professional person. Among the problems to be discussed are: identifying and analyzing the problems in using available data; identifying and analyzing the relationship of the economist to staff members of other disciplines; and identifying and analyzing the relationship of the economist to his superiors in the decision-making process.

The instructor is Dr. Jack Carlson, Senior Staff Advisor for the President's Council of Economic Advisors.

OBJECTIVES

On completion of this seminar, participants will have:

- New insights into their relationships with peers in other disciplines and with agency decision-makers
- An ability to see some continuing problems in a new perspective

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:	Nominations due:
November 18 to 22, 1968	October 28, 1968
May 26 to 28, 1969	May 5, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SEMINAR ON PERFORMANCE STANDARDS AND PROGRAM OBJECTIVES

Course D6-19

A three-day seminar to introduce program managers to a managerial tool which can provide new meaning and effectiveness to PPB and other management systems.

DESCRIPTION

All the current emphasis on different forms of managing by objectives will have little impact if there is not a concurrent emphasis on standards of performance directly related to management's objectives. The performance standards concept, as presented in this seminar, is a *developmental tool*—to measure the man against his job and to help him grow to new levels of responsibility and productivity.

The instructor is Dr. Jack Carlson, Senior Staff Advisor for the President's Council of Economic Advisors.

OBJECTIVES

On completion of this seminar, each manager will be able to:

- Analyze his own and subordinates' jobs in terms of primary "pay-off" functions
- Develop agreement with subordinates for meeting specific objectives which are time-phased for accomplishment
- Insure his own success by systematically developing a high degree of competence in his subordinates

SCHEDULE

Classes meet Monday, Tuesday and Wednesday, 9:00 a.m.-5:00 p.m.

Courses will be held:	Nominations due:
September 23 to 25, 1968	September 2, 1968
May 5 to 7, 1969	April 14, 1969

Nominations accepted after due date if class space is available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

MANAGEMENT PROBLEM-SOLVING DISCUSSION SKILLS

Course D6-12

A Developmental Program for Managers and Supervisors

DESCRIPTION

This course is designed to provide the participant with critical and necessary skills in problem-solving methods through individual and group interaction. Managers and supervisors on all levels of the management team realize the importance of having at their disposal skills and techniques to meet problem-solving situations as they occur.

Who should take this course? Anyone who has or soon will have subordinates will benefit from this course. It has been designed to reach *all managers and supervisors regardless of function or level.* The program's approach is basically that of one-to-one, or superior to subordinate, where interaction takes place not on the same level, but on the level of superior to subordinate in any functional area.

OBJECTIVES

Upon completion of this program the participant will be better able to:

- Use critical problem-solving skills and techniques on the job
- More effectively work with his staff in problem-solving situations
- Strengthen his relationships with staff members and subordinates
- Effectively utilize the creativity and resourcefulness of his staff in accomplishing the goals of his organization

SCHEDULE

This is a twenty-two hour program extending over a two week period. It is conducted in two phases. The first phase (and first week) consists of a two hour orientation and introductory session followed by 2 hours each day for four days.

During the second phase (and second week) the participant meets Monday, Wednesday and Friday for four hours each day to role play, group interact and critique problem solving situations.

OFFERINGS

1st offering—1968

Phase I—November 4-8, 10:00 a.m.-12 noon
Phase II—November 11-13, 1:00 p.m.-5:00 p.m.

2nd offering—1969

Phase I—January 6-10, 10:00 a.m.-12 noon
Phase II—January 13-15, 1:00 p.m.-5:00 p.m.

3rd offering—1969

Phase I—April 28-May 2, 10:00 a.m.-12 noon
Phase II—May 5, 7, and 9, 1:00 p.m.-5:00 p.m.

4th offering—1969

Phase I—May 26-30, 10:00 a.m.-12 noon
Phase II—May 12, 14, and 16, 1:00 p.m.-5:00 p.m.

Nominations accepted after due date if class space is available.

NOMINATION DUE DATE

Will be three weeks before course starting date. Nominations will be accepted after due date depending on course space available.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

TUITION

$160.00. This includes tuition, books, workbooks and all handout materials.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SPACE MANAGEMENT: OFFICE DESIGN SEMINAR

Course D6-3

A three-day seminar to help participants to develop a working knowledge of space management techniques.

DESCRIPTION

This is a three day program for Space Management Officers (GS 11-15). It is designed to provide a better understanding of the effects of building design and space quality on utilization; the development and use of space standards and office layout concepts; the use of color and equipment standards; long range space planning and the development and maintenance of space assignment and utilization programs.

Participants, through skilled instructors and group interaction will have an opportunity to review basic concepts, learn recent developments, and exchange ideas in an expanding field.

OBJECTIVES

When participants have completed this course they should be better able to:

- Create and operate an effective space management program
- Develop and execute successful long-range plans

SEMINAR LEADERSHIP

Both the seminar and workshop have been planned and will be under the direction of Mackey W. White, A.I.A., B.S. (Architecture) Tulane University. Mr. White was responsible for building construction, real estate and space management in the U.S. Department of Agriculture from 1943 to 1968. He will be assisted as required by a panel of working Architects, Engineers and Professional Space Managers from the Departments of Agriculture, Defense, H.U.D., G.S.A., Treasury and other Government Agencies.

Some of these instructors include: Edward W. Brooks, Chief Property Management Division, Office of Administrative Services, Treasury Department and Melvin P. Hemmer, B.S., Purdue, Deputy Director, Planning and Utilizations Division, Office of Space Management, G.S.A.

SCHEDULE

Courses will be held:	Nominations due:
August 26, 27, 28, 1968	August 5, 1968
December 4-6, 1968	November 11, 1968
February 12-14, 1969	January 20, 1969
April 23-25, 1969	March 31, 1969

Nominations accepted after due date if class space is available.

LOCATION

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C. 20004.

COURSE FEE

$115.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SPACE MANAGEMENT: OFFICE LAYOUT WORKSHOP

Course D4-25

A five-day workshop to help participants develop a working knowledge of space management techniques.

DESCRIPTION

A five-day program to train Space Management Technicians (GS 5-12). The program will consist of skilled instructors directing group interaction, lectures, discussions, and practical office layout problems to develop the skills and techniques necessary for office layout and space management.

OBJECTIVES

When participants have finished this course they should have developed greater efficiency and expertise in the following areas:

- Development of space requirements
- Concept and execution of an office layout
- Templating techniques
- Planning and executing a move
- Maintaining effective space management records and programs

LEADERSHIP

Both the seminar and workshop have been planned and will be under the direction of Mackey W. White, A.I.A., B.S. (Architecture) Tulane University. Mr. White was responsible for building construction, real estate and space management in the U.S. Department of Agriculture from 1943 to 1968. He will be assisted as required by a panel of working Architects, Engineers and Professional Space Managers from the Departments of Agriculture, Defense, H.U.D., G.S.A., Treasury and other Government Agencies.

Some of these instructors include: Edward W. Brooks, Chief Property Division, Office of Administrative Services, Treasury Department and Melvin P. Hemmer, B.S., Purdue, Deputy Director, Planning and Utilization Division, Office of Space Management, G.S.A.

SCHEDULE

Courses will be held:	Nominations due:
November 18-22, 1968	October 28, 1968
January 13-17, 1969	December 23, 1968
March 10-14, 1969	February 17, 1969
July 28-August 1, 1969	July 7, 1969

Nominations accepted after due date if class space is available.

LOCATION

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$125.00 includes tuition, notebooks and all materials.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

ADVANCED SECRETARIAL TECHNIQUES

Course D4-15

DESCRIPTION

The executive secretary is many things to many people. To her boss, she is a loyal and trusted extension of himself, to the clerical staff, she is the spokesman, example, personnel and work arbitrator. To visitors, she is the ambassadress of graciousness and thoughtfulness. To co-workers, she is the quintessence of cooperation and helpfulness.

The executive secretary must demonstrate accuracy, flexibility, initiative and sound judgment. She must promote a harmonious atmosphere for the smooth flow of work into and out of the office.

This program is designed to aid the executive secretary in performing her difficult role. This is accomplished by the informal use of group participation, class discussion, interpersonal relations, in-basket exercises, lectures, films and expert resources.

OBJECTIVES

This program will help the participant to:

- Examine the functions and problems of the executive secretary
- Look closely at herself and her performance so that she may better achieve her potential
- Understand the basic tenets of human relations so that she may better handle office problems and exert a positive influence on co-workers
- Apply the principles of effective writing so that she may better handle office correspondence

SCHEDULE

Classes meet for two weeks every Monday, Wednesday and Friday for three hours.

Courses will be held:	Times:	Nominations due:
June 3 to 14, 1968	9:30-12:30 p.m.	May 13, 1968
July 8 to 19, 1968	9:30-12:30 p.m.	June 17, 1968
August 5 to 16, 1968	9:30-12:30 p.m.	July 15, 1968
September 9 to 20, 1968	9:30-12:30 p.m.	August 19, 1968
October 14 to 25, 1968	1:30-4:30 p.m.	September 23, 1968
Nov. 18 to Dec. 2, 1968	9:30-12:30 p.m.	October 28, 1968
December 9 to 20, 1968	9:30-12:30 p.m.	November 18, 1968
January 6 to 17, 1969	9:30-12:30 p.m.	December 16, 1968
February 3 to 14, 1969	9:30-12:30 p.m.	January 13, 1969
March 3 to 14, 1969	1:30-4:30 p.m.	February 10, 1969
April 7 to 18, 1969	9:30-12:30 p.m.	March 17, 1969
May 12 to 23, 1969	9:30-12:30 p.m.	April 21, 1969

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

QUALIFICATIONS

Classes are limited to 25 participants at the GS-6 level and above.

COURSE FEE

$65.00 including tuition, books, and materials.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

SECRETARIAL TECHNIQUES

Course D4-6

DESCRIPTION

This short course is designed to help the secretary become a more efficient, productive, self-reliant aid to the executive. It will encompass and emphasize the following topics:

1. Performance, such as organization, memory management of time and work;
2. Personality, such as appearance, behavior and attitudes; and
3. Communications, such as telephone manners, letter writing, and editing.

OBJECTIVES

Upon completion of this course the participant will be better able to:

- Understand and thus fulfill better her position as an executive aid
- Organize time and office duties more effectively
- Screen correspondence more efficiently
- Write and edit correspondence more effectively
- Achieve a better image for the office by improved relations with office visitors and telephone contacts

SCHEDULE

Courses will be held:	Times:	Nominations due:
June 3 to 14, 1968	1:30-4:30 p.m.	May 13, 1968
July 8 to 19, 1968	1:30-4:30 p.m.	June 17, 1968
August 5 to 16, 1968	1:30-4:30 p.m.	July 15, 1968
September 9 to 20, 1968	1:30-4:30 p.m.	August 19, 1968
October 14 to 25, 1968	9:30-12:30 p.m.	September 23, 1968
Nov. 18 to Dec. 2, 1968	1:30-4:30 p.m.	October 28, 1968
December 9 to 20, 1968	1:30-4:30 p.m.	November 18, 1968
January 6 to 17, 1969	1:30-4:30 p.m.	December 16, 1968
February 3 to 14, 1969	1:30-4:30 p.m.	January 13, 1969
March 3 to 14, 1969	9:30-12:30 p.m.	February 10, 1969
April 7 to 18, 1969	1:30-4:30 p.m.	March 17, 1969
May 12 to 23, 1969	1:30-4:30 p.m.	April 21, 1969

Nominations accepted after due date if class space is available.

Classes are limited to 25 participants to allow maximum time for individual participation.

Classes will be held at the National Press Building, 529 Fourteenth Street, N.W., Washington, D. C.

COURSE FEE

$50.00, payable in advance. Fee includes text books and class material.

Nominations for this course may be made by using the nomination form format given on the inside back cover page of this bulletin.

For further information call Mr. Dee W. Henderson, Code 111 (388) 3247.

FACULTY

CURRICULUM IN MANAGEMENT AND PROFESSIONAL DEVELOPMENT

AUSTIN, CHARLES F. Ph.D., Harvard. Colonel, Infantry, USA (Ret'd). Formerly on Staff of Industrial College of the Armed Services, and has served as professorial lecturer at The George Washington University and at The American University.

BACK, WILLIAM. Ph.D., Iowa State. Staff economist, National Advisory Commission on Rural Poverty. Taught at Oklahoma State and Oregon State.

BUCHANAN, LEE K. M.D., University of Iowa. Chief of the Employee Health Division, USDA. Dr. Buchanan did Graduate work in Psychiatry at the Menninger Clinic. He has been medical advisor to the Sante Se Railroad, The University of Colorado and the Central Intelligence Agency.

BROOKS, EDWARD W. Chief Property Division, Office of Administrative Services, Treasury Department.

CARLSON, JACK. Ph.D., Harvard. Senior Staff Advisor for The President's Council of Economic Advisors.

CONSTANTINE, HARRY. M.S., George Washington University. Director of Staff Resources, Office of Economic Opportunity.

DUDLEY, HELEN. B.S., Simpson College. Project Officer for Management Development, Training and Development Division, Office of the Deputy Chief of Staff for Personnel. Department of the Army.

EITINGTON, JULIUS E. M.A., University of Chicago. Chief, Training Branch, Division of Personnel Management and Manpower, National Park Service.

FRY, ELGIN G. B.S., Oklahoma State. Head, Mathematical and Survey Applications Section, Washington Data Processing Center, Statistical Reporting Service, USDA.

HEMMER, MELVIN, P. B.S., Purdue. Deputy Director, Planning and Utilizations Division, Office of Space Management, G.S.A.

HENDEE, CLARE. M.A., George Washington University. Deputy Chief for Administration, Forest Service, USDA.

HERRELL, HENRY G. LL.B., National (George Washington). Deputy Administrator, Management, Consumer and Marketing Service, USDA. (Ret'd) Consultant. Recipient of USDA's Superior Award for Management.

HOFFMAN, MARION. B.A., District of Columbia Teachers' College. Taught in Prince George's County Adult Education Division, Department of the Navy.

KATZ, ROBERT N. M.B.A., Harvard, LL.B., University of Texas. Solicitor for The Federal Maritime Commission.

KNUDSEN, A. RAY. B.S., University of Oregon. Chief, Real Estate Division, Plant and Operations, USDA.

MINNIS, ROY B. Ph.D., University of Iowa. Adult Education Specialist, Office of Education, HEW.

O'BRIEN, RAYMOND A. Public Administration, Georgetown University. Director, Planning and Utilization Division, Office of Space Management, G.S.A.

PAYNE, RICHARD F. B.S., Georgia Tech. Program Manager, Space and Transportation, Facilities Management Divisions I.R.S., Treasury Department.

PELISSIER, RAYMOND F. Ph.D., American University. Management Consultant. Former Director of the School of Business at Georgetown University.

PERLMUTTER, JEROME B. M.A., The American University. Chief, Publishing and Reproduction Services, Department of State.

POULIOT, LEONARD B. M.A., The George Washington University. Director of Personnel, Smithsonian Institution. Also, Associate Professorial Lecturer in The School of Business and Public Administration at George Washington University.

RADLEY, GERALD S. George Washington University. Program Coordinator, Office of Space Management, G.S.A.

SCHAEFER, WILLIS C. Ph.D., University of Chicago. Management Analyst, Office of Management Planning, Department of State. Formerly with System Development Corporation and the RAND Corporation.

SCHINDLER, VINCENT. Chief, Space Telecommunications Branch, Supply and Facilities Management Division, H.U.D.

SEARS, WOODROW H. JR. M.S., North Carolina State. Educational Consultant. Former Educational Specialist with the Graduate School and Editor of Agriculture Extension Service.

STOCKMENT, ROBERT L. Chief of Training, Small Business Administration. Formerly Director of Programs, American Management Association.

STRAUSS, BERTRAM. B.S., Wharton School of Business Administration. Consultant to federal state and local governments. Formerly a foreign service reserve officer.

SWENHOLT, FRANKIE P. George Washington University. Model and Educational Coordinator. Syndicated Columnist of "Southern Style" and a former Director of the Nancy Taylor Finishing School. Author of monthly article "Frankly Feminine" in *Protocol.*

WHITE, MACKEY W. B.S., Tulane. Assistant Director of Plant and Operations, USDA. Responsible for real estate and space management in USDA since 1943.

WRIGHT, CLAUDE R. M.S., East Texas State Teachers College. Assistant Chief, Division of Employment and Training, Office of Personnel Management, Office of the Secretary, Department of the Interior. Taught at Eastern Texas State Teachers College and Oklahoma University.

Communications Development and Center for Modern Learning Technology

"Listening is the other half of talking. If people stop listening it is useless to talk—a point not always appreciated by talkers."—Stuart Chase.

Certainly one of the most pressing requirements of the concerned individual, in and outside of government, is the ability to be able to communicate effectively. Not only to become a better processor of your ideas, but also to be able to know what you want to say and how you want to say it.

The Graduate School's Special Programs offers a variety of courses designed to help the individual recognize his communication problem and to formulate new habits to replace old ones.

Just as important as communications is the ability to be aware of new developments in one's career field. The specialized courses developed for the professional are designed to meet these new ideas and developments.

The Graduate School's Center for Modern Learning Technology provides group and individual education through the use of programed instruction and other modern learning methodology. Programed instruction helps the student advance confidently in easy, step-by-step procedures through difficult materials. He learns at his own pace and receives immediate confirmation on his progress. With the use of Programed Instruction, the Center provides the planning and control of a training department and the counseling and guidance of a qualified instructor. The Center provides these essential elements in our programs in order to achieve the most effective learning situation.

Center for Modern Learning Technology Committee

WARREN SEARLS, Chairman of the Committee
Consumer and Marketing Service, USDA

SANFORD O. AMES, Bureau of Personnel, Post Office

CHARLES BAKER, Census Bureau, Dept. of Commerce

ERWIN DRAHEIM, Office of Personnel, USDA

JOHN GORE, Agricultural Research Service, USDA

BERT HOLTBY, Forest Service, USDA

CHESTER NELSON, U. S. Air Force, Department of Defense

LESTER REDDING, Small Business Administration

WILLIAM SLOAN, Bureau of Personnel, Post Office Department

DAVID WEAVER, Federal Deposit Insurance Corporation

Location

U.S. Department of Agriculture Graduate School, Rooms 418W and 419W, Administration Building.

For further information please call C. Paul Barlow, Supervisor of the Center for Modern Learning Technology, on Code 111 (DU8-)3427.

RESEARCH METHODS IN THE SOCIAL SCIENCES

Course D7-800

A series of seminar sessions to relate logic, mathematics, and research methods drawn from different sources to research techniques employed in social sciences.

DESCRIPTION

Each of the 15 sessions features select guest speakers who present various topics. Time is allowed for questions, comments, and discussion.

OBJECTIVES

To equip oncoming research leaders with a broader perspective for prospective responsibilities by:

- Giving them the benefit of observations based upon experience of an earlier generation of successful research leaders
- Stressing the fundamental motivations and objectives that have yielded scientific progress
- Showing the interplay of knowledge and methods acquired through different scientific disciplines
- Tracing the influence of distinctive philosophic roots that have shaped science in Western culture
- Appraising the significance of recent breakthroughs in scientific methods

SCHEDULE

Classes meet Wednesdays, 1:00-3:00 p.m.

Course will be held:	Nominations due:
September 11-January 1, 1969	August 19, 1968

Nominations accepted after due date if space is available.

QUALIFICATIONS

Participation is limited to 25, usually GS-12 and above, with graduate training or responsible experience in research and current occupancy of a position entailing research responsibilities.

COURSE FEE

$150.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

FEDERAL CONTRACT NEGOTIATION INSTITUTE

Course D6-10

A five-day institute for Federal contracting officers designed to expand their knowledge in contract negotiation.

DESCRIPTION

This institute gives contracting officers from the field and Washington an opportunity to exchange ideas on contract negotiation. Authorities from government and industry serve as speakers and discussion leaders.

OBJECTIVES

On completion of this course, the participant will have greater proficiency and understanding of:

- Techniques and procedures in negotiation
- Human factors in negotiation
- Legal requirements and administrative policy in negotiation
- Contract award and administration

SCHEDULE

Classes meet Monday through Friday, 9:00 a.m. to 5:00 p.m.

Institutes will be held:	Nominations due:
September 23-27, 1968	August 26, 1968
November 18-22, 1968	October 18, 1968
February 24-28, 1969	January 24, 1969
April 21-25, 1969	March 17, 1969

Nominations accepted after due date if space is available.

QUALIFICATIONS

Participation in each Institute will be limited to 25 Federal officials, GS-9 (or equivalent) and above, selected to insure a wide representation of agencies.

COURSE FEE

$130.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

POWER SYSTEMS ENGINEERING

Course D8-423

A two-semester course to introduce and update engineers to the field of power systems engineering and operations.

DESCRIPTION

This course is designed to serve as an introduction to engineers entering the field of power systems as well as to expand the knowledge of experienced engineers. Seminars are composed of outstanding speakers from government, industry, and university departments who appear as guest lecturers. (Six credit hours are given.)

OBJECTIVES

On completion of this course the engineer will:

- Have a better perspective concerning his particular responsibilities in relation to the over-all field of power systems
- Understand his role in power supply, planning, and operation
- Recognize the responsibilities and contributions of other specialists
- Understand the latest advances in modern power systems

SCHEDULE

September 5, 1968 through May 8, 1969, each Thursday, 6:00-8:30 p.m.

Nominations due: August 5, 1968

Nominations accepted after nomination due date if space is available.

QUALIFICATIONS

This course is open to graduate engineers, or the equivalent in experience in power systems, who have a breadth of interest in the field. The course will be of interest to electrical, mechanical, and civil engineers as well as key management personnel responsible for power systems operations.

COURSE FEE

$225.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410; or John Rixse, Code 182 (DU 3-) 7683.

SCIENCE INFORMATION AND COMMUNICATIONS

Course D6-80

A five-day seminar for scientists and engineers to acquaint them with modern information services.

DESCRIPTION

This course was developed under a grant from the National Science Foundation. The seminar includes demonstration tours of major information activities in the Washington area.

OBJECTIVES

On completion of the course, participants will:

- Understand the principles and practices of organizing and disseminating scientific and technical information
- Be aware of the expanding role of the Federal government in scientific information activities resulting from the accelerated growth of research and development
- Know how to acquire scientific and technical information through efficient use of modern information services including new Federal information programs, specialized information centers, mechanized document retrieval systems, etc.

SCHEDULE

Courses will be held:	Nominations due:
December 2-6, 1968	November 11, 1968
April 7-11, 1969	March 10, 1969

Nominations accepted after due dates if space is available.

QUALIFICATIONS

Nominees should be working scientists and engineers and their supervisors, in GS-13 (or equivalent) level and above.

COURSE FEE

$135.00, payable in advance. Fee includes text books and class material.

For further information, contact John Sherrod, on Code 111 (DU 8-) 2635; or C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

TECHNICAL INFORMATION AND DECISION-MAKING: A SEMINAR

Course D6-21

A three-day seminar for managers interested in systems which efficiently and economically serve management's need for scientific and technical information.

DESCRIPTION

The rapid growth of science and technology over the past 25 years has been accompanied by an exponential increase in the volume of information. This increase has been accompanied, in turn, by an increase in the interest in problems of effective management and use of scientific and technical information. This seminar will explore the current state of the art of information systems development and information handling technology. Various aspects of the so-called information problem will be analyzed, and examples of various systems will be presented. Future trends in information management programs of government and industry and their impact on the Federal Manager and his role and function will conclude the seminar.

OBJECTIVES

On completion of this seminar, participants should:

- Have a better understanding of the problems involved in handling scientific and technical information
- Know how to review and evaluate their own technical information programs and how to begin planning for improved systems

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:	Nominations due:
May 20-22, 1968	April 22, 1968
October 7-9, 1968	September 9, 1968
May 26-28, 1969	April 30, 1969

Nominations accepted after due dates if space is available.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

SEMINAR FOR EMPLOYEE DEVELOPMENT OFFICERS

Course D6-26

A three-day seminar to explore means for beginning or extending in-house supervisory and managerial development programs.

DESCRIPTION

PPB and other management systems are creating new demands on Employee Development Officers for developing in-house programs which will equip supervisors and managers to perform at new levels of professional competence. Consequently, EDO's increasingly are being called upon to serve as change agents within the organization and as consultants to management. This seminar is designed to provide an opportunity for EDO's to take a close look at themselves and their jobs in order to come up with better means for achieving their full potential as in-house consultants to management.

OBJECTIVES

On completion of this seminar, participants will be able to:

- Develop a model for in-house supervisory and management development programs within their agencies
- Develop a plan for meeting long-range training and development needs to achieve agency objectives.

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:	Nominations due:
October 28-30, 1968	October 7, 1968
March 17-19, 1969	February 17, 1969

Nominations accepted after due dates if space is available.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

SEMINAR FOR INFORMATION OFFICERS

Course D6-25

A three-day seminar in which information officers can examine means for extending their effectiveness as specialists within their organizations.

DESCRIPTION

This seminar is designed to take a close look at the credentials and activities of the information officer as they relate to meeting agency objectives. Too often, the information officer finds himself limited in the contributions he can make as a professional person. Through an examination of case histories and current managerial trends, along with directed self-evaluation, this seminar should enable participants to find means for making larger contributions to their respective organizations.

OBJECTIVES

On completion of this seminar, participants will be able to:

- Gain greater insight into the potential for service which exists for information officers
- Establish a stronger bond with management in seeking to achieve agency objectives

SCHEDULE

Classes will meet Monday through Wednesday, 9:00 to 5:00.

Courses will be held:	Nominations due:
May 20-22, 1968	April 22, 1968
November 4-6, 1968	October 7, 1968
May 19-21, 1969	April 21, 1969

Nominations accepted after due dates if space is available.

COURSE FEE

$100.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

BASIC STATISTICS

Course DP3-4

DESCRIPTION

This program explains and examines the basic principles upon which statistical techniques are based. The general topics covered are fundamentals of statistics; errors, accuracy and approximation; charts for named categories of data; time series; and observation for values of a variable.

The student needs only a working knowledge of fractions, ratio and proportion, and simple algebra in order to complete the course successfully.

OBJECTIVES

At the completion of this course the student should be able to understand and apply the fundamental statistical concepts to his work efforts.

SCHEDULE

Courses will be held:	Nominations due:
June 3-August 30, 1968	May 13, 1968
October 7, 1968-January 3, 1969	September 20, 1968
February 17-May 2, 1969	January 27, 1969
June 9-August 29, 1969	May 19, 1969

Classes will be scheduled for Monday, Wednesday and Friday or Tuesday and Thursday at the following times:

Section A: 9:00-10:30
Section B: 10:30-12:00
Section C: 12:30- 2:00
Section D: 2:00-3:30
Section E: 3:30-5:00

Example: Mr. John Doe; Monday, Wednesday, and Friday, 10:30-12:00.

After nomination has been received, schedules will be made by the Program Coordinator and the nominee for the most suitable time. Indicate your preference of section and days, from the information above, on the nomination form.

Nominations accepted after due dates if space is available.

COURSE FEE

$55.00. Fee includes class material and consultation with the special instructor.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

CAREER ENGLISH

Course DP2-9

DESCRIPTION

This complete English program is designed to give the student a thorough comprehension and practical application of the various principles that produce effective communication.

The course is divided into three parts, grammar, punctuation and writing, and each part may be taken separately to meet student needs.

SCHEDULE

Courses will be held:	Nominations due:
June 3-August 30, 1968	May 13, 1968
October 7, 1968-January 3, 1969	September 20, 1968
February 17-May 2, 1969	January 27, 1969
June 9-August 29, 1969	May 19, 1969

Classes will be scheduled for Monday, Wednesday, and Friday or Tuesday and Thursday at the following times:

Section A: 9:00-10:30
Section B: 10:30-12:00
Section C: 12:30- 2:00
Section D: 2:00-3:30
Section E: 3:30-5:00

Example: Mr. John Doe; Monday, Wednesday, and Friday, 10:30-12:00.

After nomination has been received, schedules will be made by the Program Coordinator and the nominee for the most suitable time. Indicate your preference of section and days, from the information above, on the nomination form.

Nominations accepted after due dates if space is available.

COURSE FEE

$95.00 for the complete program; or $50.00 for the grammar course, $30.00 for the punctuation course, and $30.00 for the writing course. Tuition includes consultation sessions with the special instructor.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

COMPUTERS: A FOUR-PART COURSE IN PROGRAMING

Course DP3-9

DESCRIPTION

This course provides the beginner with an introduction to digital computer concepts and programming techniques. The student learns to present numbers and information to a hypothetical computer, solve and print mathematical problems. This process is then carried through more advanced techniques in programing and computer applications in government and science.

OBJECTIVES

At the conclusion of this course the student will be able to understand and describe in detail the fundamental programing function and processes.

SCHEDULE

Courses will be held:	Nominations due:
June 3-August 30, 1968	May 13, 1968
October 7, 1968-January 3, 1969	September 20, 1968
February 17-May 2, 1969	January 27, 1969
June 9-August 29, 1969	May 19, 1969

Classes will be scheduled for Monday, Wednesday, and Friday or Tuesday and Thursday at the following times:

Section A: 9:00-10:30
Section B: 10:30-12:00
Section C: 12:30- 2:00
Section D: 2:00-3:30
Section E: 3:30-5:00

Example: Mr. John Doe; Monday, Wednesday, and Friday, 10:30-12:00.

After nomination has been received, schedules will be made by the Program Coordinator and the nominee for the most suitable time. Indicate your preference of section and days, from the information above, on the nomination form.

Nominations accepted after due dates if space is available.

COURSE FEE

$95.00. Tuition includes consultation sessions with the special instructor.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

EFFECTIVE MANAGEMENT PRACTICES

Course DP6-6

DESCRIPTION

Through the use of professional guidance, the Auto-Tutor machines, and workbook manual, this course is designed to introduce the manager to the newer concepts of managerial sciences as well as to improve his skills through review of time-tested techniques in effective management. It provides excellent training for new supervisors and middle-level managers as well as for trainees aspiring to management positions.

OBJECTIVES

At the conclusion of this course the student will be able to:

- Better develop an organized method of determining solution to problems
- Sharpen his definitions of problems and understand the climate for decision making
- Understand the essentials of organizational theory
- Understand how and when to extend themselves by assigning responsibility and authority to others
- Identify and forecast objectives of planning and state them in meaningful terms
- Identify and improve the effectiveness of management controls
- Manage time and deal effectively with new, time consuming assignments

SCHEDULE

Courses will be held:	Nominations due:
June 3-August 30, 1968	May 13, 1968
October 7, 1968-January 3, 1969	September 20, 1968
February 17-May 2, 1969	January 27, 1969
June 9-August 29, 1969	May 19, 1969

Classes will be scheduled for Monday, Wednesday, and Friday or Tuesday and Thursday at the following times:

Section A: 9:00-10:30	Section D: 2:00-3:30
Section B: 10:30-12:00	Section E: 3:30-5:00
Section C: 12:30- 2:00	

Example: Mr. John Doe; Monday, Wednesday, and Friday, 10:30-12:00.

After nomination has been received, schedules will be made by the Program Coordinator and the nominee for the most suitable time. Indicate your preference of section and days, from the information above, on the nomination form.

Nominations accepted after due dates if space is available.

TOPICS

1st Week: Decision Making
2nd Week: Organization Planning
3rd Week: Planning
4th Week: Delegation Practices
5th Week: Managerial Control
6th Week: Effective Use of Executive Time

COURSE FEE

$95.00 for the complete program, or $25.00 for each separate weekly topic. Tuition includes consultation sessions with special instructor.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

EFFECTIVE WRITING

Course D2-10

A six-week course to learn to write for specific audiences.

DESCRIPTION

Participants learn by doing as they present their own work for criticism and evaluation by instructor and group. Exercises are used to develop clarity and conciseness. Classes are kept small to allow extensive individual consultation.

OBJECTIVES

On completion of this course, the participant will

- Be able to communicate in writing his ideas and findings to administrators, the public and other specialists
- Have developed the ability to look critically at his writing

SCHEDULE

Classes meet Tuesdays and Thursdays, 9:30-11:30 a.m.

Courses will be held:	Nominations due:
September 24-October 31, 1968	August 30, 1968
January 7-February 13, 1969	December 6, 1968
March 4-April 10, 1969	February 14, 1969

Nominations accepted after due dates if space is available.

QUALIFICATIONS

Participation is limited to 12 to 14 individuals in professional positions.

COURSE FEE

$95.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

GOVERNMENT REPORT AND LETTER WRITING

Course D2-12

DESCRIPTION

This short course is designed to improve the caliber of Government reports and correspondence through the use of lectures, class discussions, and individual counseling on writing exercises.

The essentials of good report and letter writing will be covered. The letter writing section of the course is planned to emphasize sincerity, simplicity, clarity, and conciseness. These principles will be carried over to the report writing, which will also emphasize the importance of assembling and analyzing information, planning the outline, writing the rough draft and rewriting the report.

OBJECTIVES

Upon completion of this course the participant will be better able to

- Plan and organize his reports, letters, memoranda, and other correspondence
- Write more simply, clearly and concisely
- Achieve more strength and vigor in his writing through the use of exact words, active verbs, style variations and sentence structures

SCHEDULE

Courses will be held:	Times:	Nominations due:
March 25-April 5, 1968	1:30-4:30	March 4, 1968
April 22-May 3, 1968	1:30-4:30	April 1, 1968
May 27-June 7, 1968	9:30-12:30	May 6, 1968
June 24-July 5, 1968	1:30-4:30	June 3, 1968
July 29-August 9, 1968	1:30-4:30	July 5, 1968
August 26-September 9, 1968	1:30-4:30	August 5, 1968
September 23-October 4, 1968	1:30-4:30	September 2, 1968
October 21-November 1, 1968	1:30-4:30	September 30, 1968
November 25-December 6, 1968	1:30-4:30	November 4, 1968
January 20-31, 1969	1:30-4:30	December 30, 1968
February 24-March 7, 1969	1:30-4:30	January 27, 1969
March 24-April 4, 1969	1:30-4:30	February 28, 1969

Nominations accepted after due dates if space is available

QUALIFICATIONS

Classes are limited to 20 participants to allow for individual participation.

COURSE FEE

$50.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

COMMUNICATIONS SKILLS WORKSHOP

Course D2-21

DESCRIPTION

This communications workshop combines in an integrated program three of the essential skills in communication—reading, writing, and listening. These skills will be developed and improved through classroom, laboratory, group, and programed instruction. Instruction is oriented toward on-the-job communications of Federal employees.

OBJECTIVES

The objective of the program is to increase the overall communicative skill efficiency of each participant. This includes enabling him to

- At least double initial reading speed while improving comprehension
- Improve purposefulness, flexibility, selectivity, and build critical reading skills for on-the-job reading
- Gain greater skill in the use of words to transmit ideas, thoughts, and feelings in dealing with individuals and groups
- Understand the principles of clear, forceful writing so that he may write more effectively
- Produce a complete accurate summary, written or oral, of spoken information
- Effectively organize and summarize mentally while listening to a speaker
- Apply the improved listening skill (as much as 140%) automatically in their work

SCHEDULE

A thirty-five hour course, meeting for two and one-half hours twice a week for seven weeks, on Mondays and Wednesdays from 9:30-12:00 a.m.

Courses will be held:	Nominations due:
October 21-December 4, 1968	September 30, 1968
March 17-April 30, 1969	February 21, 1969

Nominations accepted after due dates if space is available.

COURSE FEE

$95.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

ORAL COMMUNICATION AND BRIEFING TECHNIQUES FOR FEDERAL EMPLOYEES

Course D-15

DESCRIPTION AND OBJECTIVE

This course is designed for the professional government employee and emphasizes psychological principles and speaking techniques basic to effective oral communication. The student is taught by demonstrated examples how to conduct himself in a variety of oral communication experiences. Time is allowed for each student to experiment with fundamental techniques in class under the guidance of a qualified instructor. The objective of the course is to enable each student to become a more effective oral communicator. The instructor is Mrs. Jane Glennie, lecturer in speech at the George Washington University and former speech and hearing therapist at both the Indiana University and the Hamilton House of the National Spastic Society.

TOPICAL SYLLABUS

- Psychology of Communication
- Effective Use of Voice and Diction
- The Speaker, the Speech, the Audience, the Occasion
- Speech Presentation and Composition Skills
- Report Reading, Briefing, and Summarizing Skills
- Principles of Argumentation and Debate
- Parliamentary Procedure
- Discussion Techniques
- Psychology of Successful Conference Leadership
- Effective Conference and Small Group Conversation Skill
- Telephone Briefing Techniques
- Interviewing Techniques

SCHEDULE

Class sessions meet from 1:30-3:30 each Tuesday and Thursday for 6 weeks for a total of 24 hours.

Courses will be held:	Nominations due:
October 15-November 21, 1968	September 16, 1968
March 11-April 17, 1969	February 10, 1969

COURSE FEE

$98.00. Please inclose your purchase order or billing instructions with your nomination form.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

READING IMPROVEMENT PROGRAM

Course D2-95

An 18-hour course to improve reading efficiency of adults with average or above average reading ability.

DESCRIPTION

This course incorporates the latest and most advanced techniques for developing the maximum potential of each individual learner. Instruction is oriented toward on-the-job reading of Federal employees.

OBJECTIVES

On completion of this course, the participant will:

- Be able to read most materials at double or triple his initial reading speed while maintaining comprehension
- Have developed a more organized and effective approach to on-the-job reading matter for greater efficiency
- Have improved his purposefulness, flexibility, and selectivity in reading.

SCHEDULE

Each course is scheduled with three sections and each section is limited to 20 participants. Classes meet every Tuesday and Thursday as follows:

Section A: 9:30-11:00 a.m.
Section B: 11:00-12:30 p.m.
Section C: 1:30- 3:00 p.m.

Courses will be held:	Nominations due:
June 11-July 23, 1968	May 21, 1968
August 6-September 12, 1968	July 15, 1968
September 17-October 24, 1968	August 19, 1968
November 5-December 17, 1968	October 14, 1968
January 7-February 13, 1969	December 9, 1968
February 18-March 27, 1969	January 27, 1969
April 8-May 15, 1969	March 17, 1969
May 20-June 26, 1969	April 25, 1969

Nominations accepted after due dates if space is available.

QUALIFICATIONS

Open to all Federal employees in grades GS 5-18.

COURSE FEE

$52.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

EFFECTIVE LISTENING

Course D2-04

The comprehension and retention of spoken information is one of the prerequisites for effective communication.

DESCRIPTION

This is a *short and effective* application of programed instruction with audio presentation designed for anyone whose activities require that he be able to listen effectively. *Through directed practice in the classroom,* the participant develops and retains the ability to quickly understand and summarize any oral message.

OBJECTIVES

The objective of the Effective Listening Program is to *increase the over-all listening ability* of each participant to enable him to

- Produce a complete, accurate summary, written or oral, of spoken information
- Organize materials mentally as the speaker proceeds
- Constantly analyze what is being said
- Ignore irrelevant materials and digressions
- Minimize the distracting effect of emotional and hurried delivery, ethnic and regional accents, background noise, and statements with which the listener may disagree
- Apply the improved listening skill *(as much as 140%)* automatically in his work

SCHEDULE

A one-day course offered on the following Fridays:

Courses will be held:	**Nominations due:**
May 24, 1968	April 29, 1968
June 14, 1968	May 17, 1968
July 19, 1968	June 21, 1968
August 16, 1968	July 19, 1968
September 20, 1968	August 16, 1968
October 18, 1968	September 20, 1968
November 15, 1968	October 18, 1968
December 13, 1968	November 22, 1968
January 17, 1969	December 20, 1968
February 14, 1969	January 17, 1969
March 14, 1969	February 21, 1969
April 18, 1969	March 21, 1969

Send in nominations or call to make arrangements to attend at your convenience. Courses are offered continually throughout the year.

Nominations accepted after due dates if space is available.

COURSE FEE

$17.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

PRINCIPLES OF CHEMISTRY THROUGH PROGRAMED LEARNING

Course DP5-50

A first in programed learning to be offered by the Graduate School Special Programs Department.

DESCRIPTION

This course is designed to give the student the equivalent of a first year college chemistry course through the use of programed instruction with professional assistance. Useful to all adults who wish to rapidly acquire a grasp of the principles of chemistry. (Six credit hours are given.)

OBJECTIVES

The student at the completion of this course will

- Know and understand the principles of chemistry equivalent to a two-semester college course
- Better understand and appreciate efforts of those engaged in chemical research
- Better apply the principles of chemistry in a working laboratory situation

SCHEDULE

Students advance at their own individual speed meeting with the professor once every two weeks for examination and needed assistance.

Classes meet every other Thursday, 6:00-8:00 p.m.

Course will be held:	Nominations due:
October 24, 1968-June 19, 1969	September 30, 1968

Includes holiday recess

Nominations accepted after due date if space is available.

COURSE FEE

$141.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

THEORY AND PRACTICE OF GAS CHROMATOGRAPHY

Course D5-23

A two-day scientific course

DESCRIPTION

The course is designed to benefit those with a limited amount of experience in gas chromatography as well as those new to the field. Although the most recent developments will be emphasized, the course is not a research conference for experts. The material will be of interest to those working in the laboratory as well as to those interested in evaluating the technique.

Lectures will cover basic principles and practices of gas chromatography. The presentation of physical concepts rather than mathematical derivations will be emphasized. The instructors will be Dr. Irwin Hornstein and Dr. Morton Beroza; both are affiliated with USDA's Agricultural Research Service.

OBJECTIVES

The student at the completion of the course will be able to:

- Understand the principles that permit complex mixtures to be separated by gas chromatography
- Know the limitations, advantages and modes of operation of the commonly used gas chromatography detectors
- Apply the principles to actual laboratory problems

SCHEDULE

Classes will meet on Thursday and Friday from 8:15 to 4:30 p.m.

Courses will be held:	Nominations due:
November 7-8, 1968	October 11, 1968
April 17-18, 1969	March 14, 1969

Nominations accepted after due dates if space is available.

COURSE FEE

$45.00, payable in advance. Fee includes text books and class material.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

THEORY AND APPLICATION OF NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY

Course D5-18

A three-day scientific course

DESCRIPTION

The course is designed to benefit those with a limited amount of experience in nuclear magnetic resonance spectroscopy as well as those new to the field. Although the most recent developments will be emphasized, the course is not a research conference for experts. The material will be of interest to those working in the laboratory as well as to those interested in evaluating the technique.

Lectures will cover basic principles and practices of nuclear magnetic resonance spectroscopy. The presentation of physical concepts rather than mathematical derivations will be emphasized. The instructors will be Dr. Edwin D. Becker, assisted by Dr. Robert J. Highet; both are affiliated with the National Institutes of Health.

OBJECTIVES

The student at the completion of the course should be able to

- Understand the principles and the physical basis of nuclear magnetic resonance
- Know the instrumentation and techniques used to elucidate structure by nuclear magnetic resonance spectroscopy
- Apply the principles to the actual analysis of nuclear magnetic resonance spectra

SCHEDULE

Courses will be held:	Nominations due:
June 27-29, 1968	May 20, 1968
December 4-6, 1968	November 4, 1968
May 21-23, 1969	April 21, 1969

COURSE FEE

$60.00 includes tuition and all materials.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

SUMMER STUDY SKILLS

DESCRIPTION

This Special Study Skills Summer Session is designed to offer college-bound students an opportunity to sharpen their basic skills (reading, writing, listening, and typing) before entering or returning to college in the Fall. *This is not a remedial program.* It is an intensive, 48-hour skill-development program designed to give entering freshmen a head-start and upper classmen a boost in their academic careers.

This program, which was offered to twenty students in the summer of 1966 and 1967 was evaluated highly by the participants after applying their skills during the past school year. Typical comments were:

"I am better prepared in my reading and writing courses."

"It helped me to make a 3.8 grade point average."

"It helped me to feel more prepared and confident in my classes."

Unanimously, the students agreed they would highly recommend this program.

We have added to the program this year a 24-hour typing development skill designed to give the non-typist a 40 words per minute ability and with some skill already developed a higher increase. This program will be given by EDU-CENTER FOR TYPING. Tuition will pay for the first 12 hours of the typing program and EDU-CENTER will give a $75 scholarship for the second 12 hours for each participant in the SUMMER STUDY SKILLS.

EDU-CENTER FOR TYPING is a revolutionary new audio-visual instruction system now enabling a person to acquire a typing skill in a fraction of the time required by ordinary learning methods. It has proven very successful and is receiving wide attention in the Washington area. Individual training sessions at EDU-CENTER will be set up with each student the first day.

OBJECTIVES

The objective of the Summer Study Skills is to aid the college student to increase his overall study skills ability in order that he may

- Attain better grades
- Have greater confidence in approaching his academic career
- Adjust more successfully to college demands
- Listen more critically in order to produce a complete accurate summary, written or oral, of spoken information
- Double or triple initial reading speed while improving comprehension, retention, and recall
- Write more simply, clearly and concisely for college-level requirements; i.e., term papers, book reviews
- Attain a typing rate of 40 words per minute with a new and successful typing method by EDU-CENTER FOR TYPING

SCHEDULE

July 8-August 14, 1968, Monday and Wednesdays from 9:30-12:00 and 1:00-3:00 p.m.

LOCATION

At the Center for Modern Learning Technology, U.S. Department of Agriculture Graduate School, 14th and Independence Avenue, Washington, D. C.

TUITION

Cost per person is $125.00, including tuition, workbooks, and handout materials. Individual counseling and attention will be emphasized.

This program is *not* limited to sons and daughters of federal employees.

For further information, call C. Paul Barlow, Code 111 (DU 8-) 6600 or 6410.

FACULTY

BALDAUF, TONY M. Assistant Director, Procurement and Property Management, Office of Plant and Operation, USDA.

BEARDEN, GARY. M.S., Texas A. & M. Director, Washington Data Processing Center, Statistical Reporting Service, USDA. Taught at Texas Technological College.

BECKER, EDWIN. Ph.D., University of California at Berkeley. Chief, Molecular Biophysics, National Institutes of Health. Taught at Georgetown University and participates in many special programs at Rutgers and Georgetown University.

BELLER, NORMAN. M.A., University of Nebraska. Agriculture Estimates Division, Statistical Methods Group, USDA.

DIXON, YVONNE. M.A., Boston University. Taught at University of Utah, University College Nairobi, and Bryant and Stratton in Boston.

EITINGTON, JULIUS E. M.A., University of Chicago. Chief, Training Branch, Division of Personnel Management and Manpower, National Park Service.

GLENNIE, JANE. M.A., Indiana University. Lecturer in Speech at the George Washington University. Former speech and hearing therapist at both the Indiana University and the Hamilton House of the National Spastic Society.

GUNTHER, V. SAMUEL. Chief, Contract and Procurement Management Division, Office of Plant and Operations, USDA.

HERRELL, HENRY G. LL.B., National (George Washington). Deputy Administrator, Management, Consumer and Marketing Service, USDA.

HORNSTEIN, IRWIN. Ph.D., Georgetown. Research Chemist, Market Quality Research Division, Agricultural Research Service, USDA.

KIBLER, WILLIAM E. M.S.A., Georgia. Statistical Methods Section, Research and Development Branch, Standards and Research Division, Statistical Reporting Service, USDA.

KOENIG, EDWARD. M.A., Columbia. Director of Information Services, International Agriculture Development Services.

LEVDAHL, LAWRENCE. B.A., University of Virginia. Teacher and Consultant for various educational and governmental organizations.

NOORDHOFF, LYMAN J. M.S., Wisconsin. Extension Educationist, International Extension Programs Federal Extension Service, USDA.

PALLANSCH, MICHAEL J. Ph.D., Minnesota. Head, Concentrated Milk Investigations, Eastern Utilization Research Branch, Agricultural Research Service, USDA. Taught at Georgetown.

RASPBERRY, WILLIAM. B.S., Indiana Central College. Columnist for the *Washington Post*. Received the Capital Press Club's "Journalist of the Year" award for 1966 and 1967, the Washington-Baltimore Newspaper Guild's First Award for Interpretive Writing.

RIXSE, JOHN H., JR. B.S., Registered Professional Engineer. Chief, Power Division, Office of Engineering, Agency for International Development, Department of State. Taught at The University of Virginia.

SHERROD, JOHN. M.S., Pennsylvania State University. Director, National Agricultural Library, USDA. Professional lecturer at Rutgers.

TRELOGAN, HARRY. Ph.D., Minnesota. Administrator, Statistical Reporting Service, USDA. Taught at Minnesota.

SPECIAL COURSES DESIGNED

for the Individual Agency

The Special Programs Department will redesign any course offered by the Graduate School or develop new courses to meet the specific requirements of any agency. Special courses can be conducted on site anywhere in the United States.

CATALOG MAILING LIST

Do you want to be on the mailing list (or correct your present address) to receive Special Programs Announcements and Catalogs?

If so, give name and complete address below and mail to:

Special Programs Department
277 National Press Building
529 Fourteenth Street, N.W.
Washington, D. C. 20004

Name.....

Address.....
(Street)

.....
(City) (State) (Zip code)

CATALOG MAILING LIST

Do you want to be on the mailing list (or correct your present address) to receive Special Programs Announcements and Catalogs?

If so, give name and complete address below and mail to:

Special Programs Department
277 National Press Building
529 Fourteenth Street, N.W.
Washington, D. C. 20004

Name.....

Address.....
(Street)

.....
(City) (State) (Zip code)

Do not detach, save format for subsequent reference.

Agencies should use their own agency letterhead for making nominations for courses using the following format, supplying all of the information requested. Individuals without a sponsoring agency may use plain paper.

NOMINATION FORM

Special Programs Department • Graduate School, USDA

1. Name.....Age.....
   Title.....
   GS (or equivalent) ..... Social Security No. .....
   Department or Agency.....
   Office Mailing Address.....
   Home Mailing Address.....
   Office Telephone..... .....
   (Direct Dial) (Code and Exten.)
   Home Telephone.....
2. Course (Number and title) for which nominated.....
3. Dates for which nominated:.....
4. Circle highest school grade completed:
   8, 9, 10, 11, 12; College: 13, 14, 15, 16
   List any college degrees:.....
5. PLEASE ATTACH PURCHASE ORDER or furnish the following information for billing:
   Agency.....
   Name of billing officer and title.....
   His official address.....
   (Specific location)
   Other information required by your agency for billing
   .....
6. Person to be notified concerning acceptance of this nomination:
   Name.....Title.....
   Office Address.....
   Office Telephone..... .....
   (Direct Dial) (Code and Exten.)
   Signature and Title of the official authorizing this nomination:
   .....
7. Non-sponsored students will omit questions 5 and 6 and attach check for full amount of class fee.

Send nominations to:

Special Programs Department
Graduate School, USDA
277 National Press Building
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